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Mirror Image Analysis of Web Ranks of Universities: The South Asian Top 100s

Arup Barman*

Abstract

South Asian B-schools including Indian institutions are now trying to get noticed in the virtual world through their websites. Hence the significance of launching institutional websites through an integration of administration, knowledge repositories and class rooms cannot be over-emphasized. This study examines the state of South Asian Top-100 Webometrics data to compare the level of concordance (ranking agreements) and mirror images. The concordance and mirrors images reveal the direction of relationship of variables and finally induct the innovational cues to launch effective institutional websites in South Asia.

Keywords: Concordance, Cyber Metrics, Innovation, Faculty Development, Research

Introduction

Websites are becoming the window and considered as mirror of academic institutions. It is the core marketing for academic and intellectual outputs produced by an institution. An academic institution faces difficulties without a well maintained website. Websites of institution promotes web publication; supports open access initiatives, electronic access to scientific publications and to other academic materials. All these indicators are very useful for ranking purposes too as they are not based on number of visits or page design but on the global performance and visibility of the universities.

As other rankings focused only on a few relevant aspects, specially research results, web indicators based ranking reflects better the whole picture, as many other activities of professors and researchers are showed by their web presence. The Web covers not only formal (e-journals, repositories) but also informal scholarly communication. Web publication is cheaper, maintaining the high standards of quality of peer review processes. It could also reach much larger potential audiences, offering access to scientific knowledge to researchers and institutions located in developing countries and also to third parties (economic, industrial, political or cultural stakeholders) in their own community.

There are Webometrics rankings with larger coverage of contents and variables than other similar rankings. It reflects researches focused on research results and other indicators those reflect better global quality of scholar and researches of institutions worldwide. These rankings are intending to motivate both institutions and scholars to have a web presence that reflect accurately their activities. This Webometrics can be a basis for innovation of the institutions web policy, maintenance of web volume, and quality of their electronic publications through the websites. Webometrics ranking correlates well with

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quality of education provided and academic prestige, but other non-academic variables need to be taken into account. The Webometrics Rank is a combination of four ranks that has different weights, viz.

Visibility (External in-links)	= 50 Percent Weight
Size (Web Pages)	= 20 Percent Weight
Rich Files	= 15 Percent Weight
Scholars	= 15 Percent Weight

By the Webometric Rankings, World University Ranking, Academic Ranking of World University etc. are agency based benchmarking tool that supports in the process of internal and external innovations.

The Problems

Webometrics Ranks through the selected weighted dimensions can create mirror images. The images of each dimension are reflected in the global, regional, country's rank of webs of university or institutions. There can have fourteen possible associations of four dimensions can create images on the overall ranks of a website of institution. Thus, the possible associations create different images on mirror since the weight of each is different and can be controlled by associating and disassociating the individual dimensions by making groups at time of observation. This mirror image (figure) of each group of associated dimensions can be assessed statistically since the ranking data are ordinal data. In the context of Webometrics data all the numerical reflections of all possible dimensions by pairing the variables may serve as the reflection which can be analyzed in the context of continental, regional, and country Webometric analysis.

Considering the educational mission of continent Asia in the recent years and also the ranks of Asian institutions in global education map its mirror image of various dimension may become the good beginning. If the continent Asia's webometrics are observed for analyzing the contrast of macro images say –South East Asia, South Asian educational context would help in the benchmarking of higher educational institutions through cyber innovations. This is relevant at this present juncture for the country's attempt to posit them in an educational hub. Though, we know that Indian education is stronger than the other countries of South Asia; Singapore is stronger than the other South East Asian countries, still the aggregate, mirror images can always help in innovational, development, collaboration plan. But, there are hardly such analysis based on the Webometrics data.

Objectives

- To examine the concordance among the ranked variables of webs across the cases (Top-100) of institutions in the South of Asia.
- To examine the strength of association of cyber metric ranked indicators in the context of the top ranking institutions in South Asia;
- To compare the mirror images associated ranked variables in the context of South Asian Universities.

Hypotheses

H₀₁ – There are no concordance among the ranked variables of webs across each group (Top-100) of institutions of three continental region of Asia.

H₀₂- There is no significant associations between the ranked cyber-metric indicators of institutions and these associations are always positive;

H₀₃- There no differences among the mirror image created by the associated variables in the context of South Asian Institutes/Universities.

Methodology

Data and Data Source: Ranking of Web of World Universities -2011 was the prime data source for this study. From the source three different groups of institutions ranks in website were downloaded. Total 100 hundred web ranks of the continent Asian were processed for analysis for this paper. For each university and institutions the 6 series of ranked data (Table-1) were selected.

Data analysis: For the ranked data the available statistical, non-parametric tools Kendal Co-efficient of Concordance for agreement analysis; Spearman's Rho for associated variable mirror image calculation for one for each group were applied.

Results and Discussions

Concordances: Kendall's W is a measure of the agreement of the rankings of variables across cases (universities or institutions) selected for observation and analysis. In the table-2, the value of Kendall's W for Top-100 universities of which the value =0.236 near to 0 indicating little agreements ranking variables across cases. In all cases the significance levels ($0.000 < .05$) indicate that at least one of the variables differs from the others in all three groups of institutions those were considered for observation. Thus, the hypothesis, H₀₁ – there is no concordance among the ranked variables of webs across each group (Top-100) of institutions of south Asia is partially accepted.

Strength of Associations and Images

Mirror Images of Web Ranks of South Asian Universities: Observable disagreement of ranks of the variable posits further to examine the association of ranked variables among the selected groups of universities of south Asia. Association of ranks of each variables for web ranks for Top-100 universities of South Asian Institutions were examined the through the Spearman's Rho to examine the mirror images of mutually associated variables. This is nonparametric correlations table displays correlation coefficients, significance values, and number of cases with non-missing values. In the nonparametric correlations table we may see information for Kendall's tau-b and/or Spearman's rho. Both Kendall's tau-b and Spearman's rho use the ranks of the data to calculate correlation coefficients. Spearman's rho is a rank-order correlation coefficient which measures association at the ordinal level. The sign of the correlation coefficient (Spearman's Rho of world rank & size=0.722 significant at $.000 < .05$; world rank & visibility of webs= 0.584, sig. $0.000 < .05$; Rich file & World Rank= 0.768, sig.= $0.000 < 0.05$; scholar & world rank = 0.602, sig. $0.000 < 0.05$) indicates the positive direction of the relationship. This is a nonparametric version of the Pearson correlation based on the ranks of the data rather than the actual values. In the table-3, values of the correlation coefficient range from -1 to 1. The values of the correlation coefficients are indicating the strength, with larger absolute values indicating stronger relationships.

The sign of the correlation coefficient (Spearman's Rho of visibility ranks & size ranks =0.589 significant at $.000 < .05$; Rich Files ranks & size ranks= 0.599, significant at

0.000<.05; Scholar & Size Rank= 0.155, significant at 0.124.>0.05) indicated insignificant positive images. This is a nonparametric version of the Pearson correlation based on the ranks of the data rather than the actual values. In the table-3, values of the correlation coefficient range 0 to 1. The values of the correlation coefficients are indicating the strength, with larger absolute values indicating stronger relationships. In the context of visibility of rich files and scholars the Spearman's Rho =0.498, significant at 0.000<0.05 indicated relatively strong positive images. In the context of association between visibility and scholars Spearman's Rho= -0.019, significant at 0.853>0.05 indicates insignificant negative images. Spearman's Rho of rich files and scholar = 0.223, significant at 0.025> 0.05 indicated significantly weak association (weak image creator) in the context of South Asian Institutes.

In the context of Web Ranks of the indicators of South Asian Institutes, association between visibility and scholars Spearman's Rho= -0.019, significant at 0.853>0.05 indicates insignificant negative images and the association between rich files and scholar = 0.223, significant at 0.025> 0.05 indicated significantly weak image creator accepts hypothesis H_{02} . *there is no significant associations between the ranked cyber-metric indicators and these associations* and maybe relationship in the negative direction.

Mirror Images

For comparing the mirror images of associated indicators a metrics (Table -5) of Spearman's Rho prepared from the absolute values appeared in the Table -5. The levels and strength of mirror images of the Asian and South East Asian, South Asian revealing minor dis-concordances The associated variables rich files, visibility, size, world ranks of webs of institutions of South Asian contexts do not reveals any significant differences in the level of mirror images. Though, the associations of variables created weak image because of the procedure of data collection. There cannot be negative association and thus any association should not create negative image on global rank. In contradiction to logic of association revealed by the statistical images of South Asian Institutes showed (Table-5) negative images may create lot of questions regarding the scholars and visibility dimension. Hence, the study has revealed the fact that in developing web for institution in South Asia, the institutions needs to consider the factor of visibility and the scholar dimensions of web development. Images Decomposition and Contrasts (Table-5)

- Size and World Ranks: Reflection of strong image
- Visibility and World Ranks: Reflection of Strong image
- Rich files and World Ranks: Reflection of strong image
- Scholars and World Ranks: Revealing better image in the web ranks than South Asia
- Visibility and Size: Asian Top-100 created weak image
- Rich Files and Size: South East Asian Institutions created stronger image
- Web ranks image of South Asian Top-100 are weak image in the case of scholars size scholars scholastic contents posted in the webs; scholars visibility; and rich files and scholars.

Implications and Conclusion

No doubt, the ranked data while it was analyzed by mirror images (Spearman's Rho) transforms the micro-data (Ranks of institutional website) to an aggregate level. It may

confuse the reader as well as policy makers and web developers. But, many a time we may confuse by observing the micro-data and micro-level analysis and may forces to become complacent in innovation and creativity and in the competitions. In the case of South Asia, the ranked data on the web of Indian Institutes, hence, the study is revealing a macro picture of core leading country in the academic and educational façade. Hence, any possible level of implications of the study would have parallel influence on India and the other country of the regions as well.

This study may be useful for B-schools and the individual departments of any university which aim to stay on run of completion. Present study suggests that south Asian as well as India Institution should take care of aspects such as scholars size; scholars scholastic contents posted in the webs; scholars visibility; and rich files to stand in the cue of global academic and knowledge competitions. There is no time to indulge in self-complacency in the context of web development if South Asian people want to develop the region as education hub. The institutions of South Asia as well as Indian B-schools must proceed by removing the complacency for web development. South Asian institute must move more carefully by displaying an exhibit-able intellectual prowess of any institutions and stock of intellectual capital.

[**Acknowledgement:** This paper is outcome of UGC support towards pursuing post-doctoral research on HRD Collaboration in India and South East Asian Nations.]

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Ortega, Jose Luis & Aguillo Isidro. (2009). Mapping world-class universities on the web: Information processing & management. 2009. Vol. 2, No. 45: 272-279.

Qiao Shaojie Peng & Jing Hong Li. (2010). Rank: A hybrid page scoring approach based on social network analysis.

Web Resources

<http://research.webometrics.info/methodology.html>

http://www.webometrics.info/about_rank.html

http://articles.timesofindia.indiatimes.com/2009-10-09/uk/28089369_1_top-100-top-position-global-stage

http://articles.timesofindia.indiatimes.com/2010-09-17/india/28220501_1_qs-world-university-rankings-three-rankings-academic-ranking

http://business-schools.webometrics.info/best_practices.html

Exhibits

Figure 1: Mirror Image of Associated Dimensions

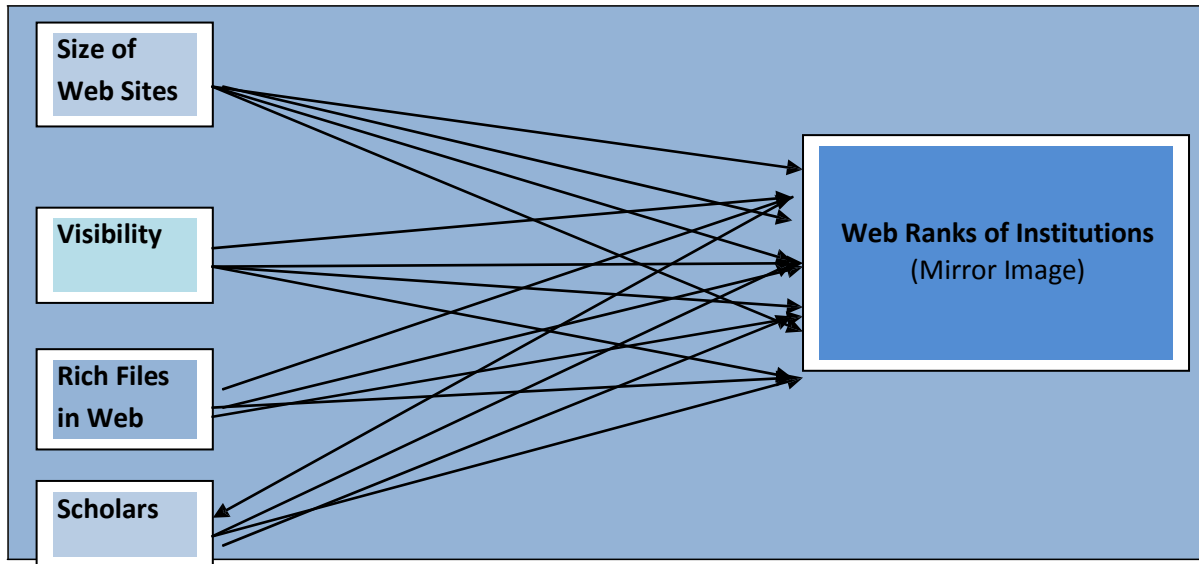


Table 1

Universities/Institutions	Data (All Ranks)
Top 100-Asian Universities Top 100-South East Asian Universities Top 100-South Asian Universities	World Ranks
	Continent Ranks
	Positional Variables
	Size
	Visibility
	Rich Files
	Scholars

Table 2

	South Asian Institutions
N	100
Kendall's W (Coefficient of Concordance)	0.236
Chi-Square	94.496
df	4
Asymp. Sig.	.000

Table 3
Strength of Association Ranked Cyber Metric indicators of South Asian Universities

		WORLD RANK	SIZE	VISIBILITY	RICH FILES	SCHOLAR
WORLD RANK	<i>Spearman's Rho</i>	1.000				
	<i>Sig. (2-tailed)</i>	.				
SIZE	<i>Spearman's Rho</i>	.722	1.000			
	<i>Sig. (2-tailed)</i>	.000	.			
VISIBILITY	<i>Spearman's Rho</i>	.584	.589	1.000		
	<i>Sig. (2-tailed)</i>	.000	.000	.		
RICH FILES	<i>Spearman's Rho</i>	.768	.599	.498	1.000	
	<i>Sig. (2-tailed)</i>	.000	.000	.000	.	
SCHOLAR	<i>Spearman's Rho</i>	.602	.155	-.019	.223	1.000
	<i>Sig. (2-tailed)</i>	.000	.124	.853	.025	.

** Correlation is significant at the .01 level (2-tailed).

Table 4
Metrics of Mirror Image
Top-100 South Asian Web Ranks of Universities

		WORLD RANK	SIZE	VISIBILITY	RICH FILES	SCHOLAR
WORLD RANK	Spearman's Rho	1.000				
SIZE	Spearman's Rho	(0.722)	1.000			
VISIBILITY	Spearman's Rho	(0.584)	(0.584)	1.000		
RICH FILES	Spearman's Rho	(0.768)	(0.768)	(0.498)	1.000	
SCHOLAR	Spearman's Rho	(0.602)	(0.155)	(-0.019)	(0.223)	1.000

*Figures- *Asian; [South East Asian]; (South Asian)*

Values in the parentheses are Spearman's Rho of Asian Web Ranks of indicators

Table 5
Metrics of Mirror Image of Asian Top 100, South East Asian
and South Asian Web Ranks of Universities

Associated Variables/ Mirror images	Spearman's Rho	Interpretations	Acceptance and Rejection
SIZE & WORLD RANKS	(0.722)	South Asian Context significant and strong mirror image	H ₀₃ Accepted
VISIBILITY & WORLD RANKS	(0.584)	South Asian Context significant and relatively strong mirror Image	H ₀₃ Accepted
RICH FILES & WORLD RANKS	0.768)	South Asian Context Significant and strong mirror Image	H ₀₃ Accepted
SCHOLAR & WORLD RANKS	(0.602)	(South Asian context significant and strong mirror Image)	H ₀₃ Accepted
VISIBILITY & SIZE	(0.584)	(South Asian context Significant and relatively strong mirror image)	H ₀₃ Accepted
RICH FILES & SIZE	(0.768)	(South Asian context Significant and Strong mirror image)	H ₀₃ Accepted
SCHOLAR & SIZE	(0.155)	(South Asian context Significant and weakest mirror image)	H ₀₃ Accepted
RICH FILES & VISIBILITY	(0.498)	(South Asian context significant and weak mirror image)	H ₀₃ Accepted
SCHOLAR & VISIBILITY	(-0.019)	(South Asian context insignificant but negative mirror image)	H ₀₃ Rejected
RICH FILES & SCHOLARS	(0.223)	(South Asian context significant but weak mirror Image)	H ₀₃ Accepted

*Figures- *Asian; [South East Asian]; (South Asian)*

Values in the parentheses are Spearman's Rho of Asian Web Ranks of indicators

Prospects of Clean Technologies for Sustainable Business

P Vijaya^{*}

Abstract

In the present global scenario businesses need to be competitive. This is all the more significant in the context of manufacturing sector in the wake of low cost manufacturing nations like China, and others. However one change which has impacted the entire world is climate change and consequent global warming with adverse effects. Climate change is increasingly assuming significance in planning and strategic decision by the governments and businesses all over the world. It impacts all countries, but is particularly severe in developing countries. This has led to the realization of the need to adopt measures to mitigate climate change. Manufacturing firms are under the regulatory and consumer pressures. Clean technologies have therefore emerged as a solution towards sustainability.

Keywords: Clean Technologies, Sustainable Business, Emerging Nations

“Sustainability is here to stay or we may not be” -Niall Fitzgerald

Introduction

Since 1991, the Indian economy is being progressively liberalized and its integration to the global economy is deepening. Liberalization and globalization have provided unprecedented opportunity for the growth and expansion of the industry in general and the manufacturing in particular. Indian Industry has to not only face stiff competition from free imports but also continue its efforts to grow its export capability through competitiveness. There is a continuous need to benchmark the Indian manufacturing sector against the best in the world and enhance competitiveness of the manufacturing sector. Ultimately, it is firms that compete in the market and not countries. Therefore, it is necessary for them to become competitive by building abilities to acquire, assimilate, develop new technologies; reduce production costs; cut down delivery time; practice Total Quality Management; enhance productivity and customer service. In the increasing global focus on sustainable business practices it is necessary for the Indian industry to adopt carbon efficient or clean technologies. Clean technologies have emerged as a necessary imperative with the climate changes and the impending dangers to planet earth. Climate change is increasingly becoming a central topic of debate and strategic decision making by Governments and businesses all over the world. The warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperature, widespread melting of snow and ice, and rising global mean sea level. It impacts all countries, but is particularly severe for developing countries like India, given their vulnerabilities, inadequate means and limited capacities to adapt to its effects.

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The global concerns are represented through the pre-eminent business voice going into COP15, the Communiqué: ‘A strong, effective and equitable international climate framework will stimulate the domestic policy interventions, bilateral and regional deals that are needed as a matter of urgency to deliver on intermediate and long-term reduction targets and accelerate construction of the low-carbon economy. This will unlock the potential of business to do what it does best: to invest profitably, to innovate, and make affordable low-carbon products and services to billions of consumers around the world. The more ambitious the framework, the more business will deliver’. The manufacturing sector is the major contributor of greenhouse gas emissions. The International Energy Agency estimates that 70% of greenhouse-gas emission reductions could be achieved through the diffusion of existing low-carbon and energy-efficient technologies, along with technologies already in an advanced state. These technologies are transferred through projects, and through products that are bought and sold, beyond national boundaries and at a fairly rapid pace. Companies transfer technology constantly, either within its own branches in different countries, or by selling it to other companies operating elsewhere.

Cognizant of this need, the government of India has taken several policy measures towards combating climate change. The present plan of Government of India constitutes one of the strongest responses to global climate change by any developing country. India has already achieved emission intensity reduction by 17.6% between 1990 and 2005. Going forward, given the recent successes of Indian industry in energy efficiency, renewable energy and green buildings and enhanced commitment to address climate change issues, the 20-25% emission intensity reduction goals, set out by the Indian Government, should be achievable. As India reduces emission intensity of its economy by 20-25% by 2020, numerous investment opportunities are likely to emerge in the key sectors. These include (a) Industrial energy efficiency: An investment opportunity of Rs 82575 million exist in industrial energy efficiency leading to annual saving potential of Rs 37510 million (b) Renewable energy: 20,000 MW target of solar energy capacity by 2022 and pipeline of other renewable energy projects such as biomass, wind and small hydro present huge investment opportunity in the sector in coming years (c) Green Buildings: One billion sq. ft. of green buildings is being targeted to be set-up in India by the year 2012, leading to significant investment requirement in the sector and (d) Cleaner Conventional Energy Technologies: Indian Government has set a target of having up to 50% of new thermal power generation capacity based on clean coal technologies. The investment requirement in clean conventional energy technologies is relatively higher, at present. In this scenario of a proactive and environmental friendly policy framework the Indian industry must adopt clean and sustainable technologies to meet the global challenges and achieve efficiency and competitiveness.

Climate Change as a Business Issue

Climate change is increasingly being seen as a strategic issue, and leading companies are taking action now to mitigate the risks and take advantage of the opportunities arising from it to ensure a position for themselves in the emerging low-carbon global economy. The risk that climate change poses to any individual business varies, but nearly every company will face some pressures. The business risks from climate change include:

Regulatory risk: Companies with significant GHG emissions or energy intensive operations face risks from new state, national and international regulations limiting carbon

emissions and imposing a cost on the same. While few countries already have mandatory climate change legislation in place, momentum for similar legislations in many countries is growing. California and ten Northeastern states in the US have already taken regulatory action to ensure emission reductions. Japan, China and others have instituted GHG emission reduction targets, fuel emission standards and renewable energy mandates. Meanwhile, the entire EU is pushing to reduce GHG emissions under an ambitious cap and trade carbon emissions trading programme already valued at over US \$30 billion a year. All major companies including oil producers, banks and automakers will be impacted by the fast-spreading regulations.

Physical risk: Businesses are at risk from the physical impacts of climate change, including the increased intensity and frequency of severe weather events such as prolonged droughts, floods, storms and sea level rise. Climate change may worsen dry seasons and droughts, as well as weaken water retention in the variable monsoon periods. This can have alarming impacts considering the fact that 65% of the Indian agriculture is rain-fed, and one-sixth of the country is already drought-prone. Moreover, floods affect an area of around 7.5 million hectares per year. With climate change impacts becoming more pronounced, an increasingly urbanized population may become vulnerable to new flood risks.

Reputational and competitive risk: Tightly linked to the regulatory risk in the global and domestic market places, climate risk preparedness will be a key driver in a company's ability to compete. General Electric, for example, sees huge growth opportunities from its many new climate-friendly product lines, such as wind turbines, high efficiency gas turbines, IGCC power plants and hybrid diesel-electric locomotives. India is already a production hub of small fuel efficient cars and its potential has increased as most European and American auto manufacturers realize the competitive risk arising out of smaller cars.

Litigation Risk: Companies in carbon-intensive industries such as oil and gas, electric utilities, and automobile manufacturing are already starting to face litigation concerning EU, are impacted by stringent emission norms applicable in the European market. Similarly, cement manufacturers are now facing the litigation risk for high emissions during the production phase. The potential liability is immense should the courts find companies guilty in such cases. Even if some of the lawsuits are unsuccessful, the costs of litigation and the damage to reputation incurred by some companies could have been detrimental. Clean technologies therefore have emerged as a necessary imperative in business organizations and in particular the manufacturing industry.

Clean Technology

Trends: In 2008, clean technology venture investments in North America, Europe, China and India totaled a record \$8.4 billion. The preliminary 2008 total represents the seventh consecutive year growth in venture investing, widely recognized as a leading indicator of overall investment patterns. China is seen as a major growth market for cleantech investments currently, with a focus on renewable energy technologies. Annual Cleantech Investment in North America, Europe, Israel, China, & India is given in Exhibit 1.

Definition: Clean technology includes the renewable energy (wind power, solar power, biomass, hydropower, biofuels), information technology, green transportation, electric motors, green chemistry, lighting, and many other appliances that are now more energy efficient. It is a means to create electricity and fuels with a smaller environmental footprint. And it is the need to make green buildings both more energy efficient and environmentally benign. While there is no standard definition of "clean technology," it has been described by Clean Edge, a clean-tech research firm, as "a diverse range of products, services, and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources, and cut or eliminate emissions and wastes." It notes that "Clean technologies are competitive with, if not superior to, their conventional counterparts. Many also offer significant additional benefits, notably their ability to improve the lives of those in both developed and developing countries"

Adopting Clean Technologies: Adopting clean technologies or going green is the voluntary pursuit of any activity that encompasses concern for energy efficiency, environmental management, water management, waste management and recycling. Green practices ultimately lead to sustainable development and equitable growth. Today public and private sectors are seeking ways to reduce environmental and human health risks posed by climate change, natural resource depletion and toxic contamination to environment. Being clean/green is no longer a cost of doing businesses; it is a catalyst for constant innovation, new market products and services. Some of the Activities which can be undertaken by the firms are:

- Design and implementation of Environmental Management System (EMS) as per ISO
- Implementing 14001
- Design and implementation of Occupational Health and Safety Management System as
- Implementing OHSAS 18001
- Internal auditor and Lead auditor on ISO 14001 and OHSAS 18001
- A Clean Development Mechanism (CDM)
- Green audits / cleaner production audits
- Environmental projects -cleaner production projects in partnership with international agencies
- Safety audits as per IS-14489: 1998
- Web-based waste material exchange
- Waste management studies
- Hazardous waste management

Energy Efficiency and Sustainable Growth

Energy cost being a major component of production cost, excellence in energy efficiency ensures a healthy bottom line through the most productive consumption of energy. Energy efficiency also enables resource conservation bringing down the need for more resources. It also leads to reduced Green House Gas (GHG) emissions, lesser pollution levels and a healthier environment. This necessitates increased usage of natural resources, such as, coal, oil, energy, electricity & water. Byproduct of this enlarged resource usage is greater air emissions, waste generation and waste water discharge, thus making the earth spin out of its ecological balance. Achievement of higher growth rate with optimal use of resources

and adopting better management practices to reduce the emissions & discharges is the need of the hour. Towards realizing this objective, CII has initiated a new programme titled Mission on Sustainable Growth (MSG). Being cognizant of the need of sustainable growth and dwindling natural capital, firms need to attain the following Ten -Natural Capital Commandments:

1. Reduce specific consumption of energy and water by 2-6%* every year over next ten years
2. Reduce specific generation of waste and reduce the quantum of waste going to landfills by 26%* every year over next ten years
3. Increase use of renewables, including renewable energy by 2-10%* every year in place of Non-renewables over next ten years
4. Reduce specific greenhouse gas emissions and other process emissions by 2-6%* every year over next ten years and explore opportunities through Clean Development Mechanism (CDM) & other Carbon Exchange Programs
5. Increase use of recyclables and enhance recyclability of resources embedded in the product by 2-10%* every year over next ten years
6. Increase the share of harvested rain water in the overall annual use of water by 2-10%* every year over next ten years
7. Incorporate life cycle assessment criteria for evaluating new and alternative technologies & products
8. Strive to adopt green purchase policy and incorporate latest clean technologies
9. Take lead in promoting and managing product stewardship program, by forging partnerships with businesses and communities
10. Reduce depletion of natural capital which is directly attributable to company's activities, products and services by 2-10%* every year over next ten years. We also commit to demonstrate attainment of these commandments in our pursuit to certifications such as ISO 9001, ISO 14001, OHSAS 18001, SA 8000, Green Buildings, Eco Labels and the like.

Clean technologies in Indian Companies

Many Indian companies are adopting technologies, practices and approaches that will help build a carbon constrained economy. Many have been adopting carbon mitigation actions to reduce their cost and gain reputation and also a competitive edge. Companies in India have presently sought strategic benefits from voluntary GHG reductions through operational improvement, anticipating and influencing climate change regulations, accessing new sources of capital, improving risk management, elevating corporate reputation, identifying new market opportunities, and enhancing human resource management. The Indian private sector is increasingly working in tandem with the global markets because of its clientele and the technological processes used in production cycles. Improving the efficiency of the supply chain of one's company is no longer a regulatory risk but an informed and strategic tool to be deployed for improving profit margins and public image. Some of the clean technologies in the Indian industry are:

Confederation of Indian Industries: India's biggest business associations have taken the lead in engaging with the Indian industry on climate change issues. One of India's apex industry associations, Confederation of Indian Industry (CII), has established the CII-ITC Centre of Excellence for Sustainable Development and the CII-Sohrabji Godrej Green Business Centre in order to engage with the industry on sustainable development issues.

These institutions together with the energy policy division of the CII have undertaken several initiatives, including an indigenous standard for green buildings, the CII Code for Ecologically Sustainable Business Growth (as of March 2009, 220 industrial units have voluntarily committed to take up the code), promoting international cooperation and building linkages for bringing green technologies to India, etc.

Power Efficiency at NTPC: India's single largest electricity utility company, NTPC, established the Centre for Power Efficiency and Environmental Protection (Cen PEEP) in collaboration with USAID with a mandate to reduce GHG emissions per unit of electricity generated by improving the overall performance of coal-fired power plants.

Plantation at ITC: ITC, one of India's foremost private sector companies, and disseminating knowledge about improved technologies Committee that looks and practices. has a Carbon after company strategies to reduce its climate footprint. By greening 80,000 hectares of land through total farm and social forestry plantations, ITC has sequestered more carbon dioxide than what it emits. In 2008, the company drew 24.1% of its energy requirements from renewable sources produced internally.

Emission Control at Larsen and Toubro: Larsen and Toubro (L&T) in India has also undertaken several initiatives to reduce its GHG emissions. The company meets nearly 8% of its electricity requirement through the use of renewable energy sources. L&T uses technology to deliver products that conserve energy and are less resource intensive.

Initiatives at Wipro: Wipro has launched 23 In the green building sector, CII has facilitated certification of several LEED Platinum rated buildings, which are now being built across India.

Green buildings: K Raheja (a real-estate developer) has proposed all his future projects to be LEED certified. MNCs like HSBC, ABN AMRO, Wal Mart, Microsoft, Gillette and Carrefour are also opting for green complexes in India. Of the 22 LEED-rated buildings in India, 5 are platinum rated. Over 218 LEED green building projects in the country are underway, amounting to more than 130 million square feet of space and representing construction that is significantly less resource intensive than traditional construction. The Indian Green Building Council has set the goal of achieving 1 billion square feet of green building space by 2012. Indian industry has also achieved remarkable progress in energy efficiency and renewable energy. Average energy intensity in key sectors such as cement and iron and steel has been declining consistently. In August 2009, India's Prime Minister unveiled an energy efficiency trading system designed to save 5% of the country's energy consumption, and 100 million tonnes of carbon dioxide annually by 2015. The initiative, which is expected to cover around 700 installations, is to be underpinned by a market in tradable energy efficiency certificates.

Smart Grid Technologies: Smart Grid technologies are at last becoming a reality in India. Smart grid systems allow electricity customers to lower their carbon footprints without having to compromise with their lifestyle or habits, and also create an extremely profitable business opportunity for electric utilities and distribution companies.

Renewable Energy Technologies

India is in a position to play a major role in large-scale commercialization of renewable energy technologies and can offer technology transfer to other developing countries and support them in building capacity. The country has already achieved installation of over 10,000 MW of renewable energy-based capacity, and stands fourth worldwide in terms of wind power installed capacity. It is notable that more than 95% of the total investments in renewable energy in India have come from the private sector. Suzlon, an Indian owned company, has managed to blend strategies creatively to leapfrog innovation to enter new technology markets. Operating in 20 countries, Suzlon is ranked as the fifth leading wind turbine supplier in the world, with over 10.5% of the global market share in 2007. The approval of the National Solar Mission has given huge impetus to the solar cell manufacturing companies in the country. Tata BP Solar and Moser Baer India have taken the lead in this sector. In September 2009, Moser Baer India won the contract for the one MW project by Mahagenco, a power generation company owned by the government of Maharashtra.

Carbon Efficient Technologies

Efforts to mitigate climate change and global warming offer new opportunities for the Indian industry and business to leapfrog the energy and resource intensive development process being witnessed by the developed world. It is clear that environmentally conscious investment decisions can allow the country to enter into an era of carbon efficient advanced technologies. Entrepreneurs adopting environment friendly measures in their business ventures can now look forward to additional support from investors while contributing to conservation efforts. Investment up to US \$100 million will be raised for various small and medium green enterprises (SMEs) in the country by 2012 under the 'New Ventures India' scheme launched by the US-based World Resources Institute as part of a USAID programme.

Some of the key opportunities specific to the green initiatives in the last couple of years, most of which have resulted in significant savings for the company; for example, all the CFLs in the Bangalore campus of Wipro were replaced with LED lights resulting in 75% saving in electricity consumption. energy sector include the Clean Development Mechanism, diversification into renewable energy and GHG accounting, which serves as a driver for development of new products and services that mitigate GHG emission from the value chain. ONGC is the leading central PSU in developing CDM projects in India. The company has 4 registered CDM projects with potential reduction of 119,655 tonnes of carbon dioxide equivalent emissions annually; it is developing 13 more potential CDM projects.

Energy Efficiency in the Automobile Sector

For the automobile industry, the most prominent commercial opportunities exist in the form of energy efficient vehicles, cleaner fuels, green transport and mass rapid transit solutions. The Reva Electric Car Company in Bangalore is currently the world's leading electric car manufacturing corporation. REVA offers not just efficient design, but efficient production as well. REVA's new low carbon assembly plant in Bangalore is being built as per the LEED guidelines, harvesting rainwater, using solar energy for heating and lighting, and making the most use of natural light and ventilation. The first charge in every REVA car is made using solar electricity. A battery 'second life' programme further increases

efficiency and reduces waste. DLF, a major real estate developer, is coming up with the first-ever private metro project in India. There is a big thrust on commissioning energy efficient buses running on clean fuels in New Delhi prior to the Commonwealth Games in 2010. This has emerged as a prominent business opportunity for Indian automobile manufacturers. For instance, according to Tata Motors,^l with climate change, there is an increase in demand of fuel efficient vehicles due to their low GHG emissions.

Green Products

Climate change is creating a demand for outputs from the material sector which can serve as green alternatives to carbon and energy intensive resources and products. Talking about Saint Gobain, a large part of their products represent a solution for climate change. Around 30% of Saint-Gobain's net sales and 40% of its operating profit derive from energy saving solutions. Substantial investment is also being poured into product development to improve the resilience of material goods to climate change wear and tear. In the construction and engineering sectors there is a rising demand for buildings that are compliant with ECBC/LEED guidelines, which in turn creates a demand for companies that are adequately equipped with the knowledge, skills and abilities required to deliver these solutions. Indian and global companies with a portfolio of products designed to curb emissions and energy intensive practices, are already accounting for sizeable profits associated with these opportunities. Technology solution providers are faced with the opportunity of developing innovative solutions to help society adapt to climate change. For example, Jain Irrigation Systems, the world leaders in irrigation systems, has recently bagged an Rs 77.8 crore worth of World Bank order to supply and service drip and sprinkler irrigation systems in 25 sub-basins in Tamil Nadu.

Special Case of Micro, Small and Medium Enterprises

In India, with millions of informal micro, small and medium scale enterprises, industrial ecology concepts can also be applied to identify opportunities for reducing total material consumption and disposal. In the town of Tirupur, Tamil Nadu, a 1996 study highlighted that while no small textile producer used much of resources in aggregate, but more than 4000 individual small-scale units consumed 90,000 kiloliters of water and 1,200 tons of firewood every day ^{xiii}. By identifying how raw materials, energy and water were consumed in various stages in the textile processing supply chain, the researchers pinpointed opportunities for improving resource recycling and efficiencies. A local entrepreneur then developed an innovative means to recycle wastewater using waste heat from the dying process, thus simultaneously reducing the energy requirements, GHG emissions and conserving wastewater – a truly systemic solution that was implemented in many dyeing units. Another solution was offered to replace firewood with textile wastes that would give a double advantage of leaving forest cover intact as well as lowering emissions

The approach associated with industrial ecology commands attention to an examination of all possible resource problems a company might face and not just a single issue within its walls. Indeed, in expanding boundaries to nearby companies as in Nanjangud and across the product life-cycle as in the steel sector, industrial ecology expands the solution for Indian companies to tackle climate change. By collaborating with others to reduce waste and greenhouse gases as well The Ministry and the Central Pollution Control Board (CPCB) has released a study that for the first time calculates a Comprehensive

Environmental Pollution Index (CEPI) for 88 key industrial clusters in India, using a series of objective criteria. The CEPI is a rational number to characterise the environmental quality at a given location following the algorithm of source, pathway and receptor. The index captures the various health dimensions of environment including air, water and land.

Conclusion

As climate change poses direct threat to businesses, it is making its place as a business risk in the boardrooms and then transforming itself into an opportunity. The stress is on thinking out-of-the box and switching over to a low-carbon operation. Companies that manage and mitigate their exposure to climate change risks while seeking new opportunities for profit will generate competitive advantage rivals in a carbon constrained future. Where there is risk, however, there is also an opportunity, and companies are increasingly seeing great business prospects in addressing climate change.

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Exhibit 1

Year	Investment (\$mil)
2001	506.8
2002	883.2
2003	1,258.6
2004	1,398.3
2005	2,077.5
2006	4,520.2
2007	6,087.2
2008*	8,414.3

*2008 data preliminary

Source: Cleantech Group

Applying Six Sigma in Software Companies for Process Improvement

Neeraj Kumari*

Abstract

Six Sigma approach is a structured quantitative method which was invented by Motorola in 1986 for improving the product quality. Its aim is to enhance organization's performance by using statistical analytic techniques. After two decades of successful implementation in manufacturing, Six Sigma is approved as an effective methodology for improving quality. The study aims to show the successful application of Six Sigma in software companies for process improvement. The paper concludes that Six Sigma can bring large benefits for software companies too. Furthermore, software companies like Ericsson, Tata Consultancy Service, etc. have already started to implement Six Sigma approach. However, there are still some problems and misconceptions existed about the applicability of Six Sigma in software companies.

Keywords: Six Sigma, Software Companies, Process Improvement

Introduction

Six Sigma is a structured quantitative method which is originally invented for reducing defects in manufacturing by Motorola in 1986. Its aim is using statistical analytic techniques to enhancing organization's performances, and to improving quality. Since Six Sigma has evolved over the last two decades, its definition is extended to three levels:

- Metric
- Methodology
- Management system

Six Sigma approach satisfies all the three levels at the same time. Those levels are discussed in the following sections:

Review of Literature

Six Sigma strives for Total Customer Satisfaction in services (Erwin, 2000). As illustrated by Behara et al (1994, p12) customer satisfaction is a multistage process where levels of satisfaction are multiplied as different facets of the service are exposed to the customer. These facets cover a broad range from ethical practices of the business to timely response to knowledgeable staff etc. So for instance no matter how fresh and tasty a McDonald's burger is, for a customer who has moral issues with the low wages of their employees, fulfillment will never be attained. The key notion is that different customers have different patterns of expectations for the components involved and so, it is possible to have

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zero customer defection? Not everyone likes the same things and thinks in the same way and thus the service provider must focus on the elements that will please the majority only. Six Sigma is undeniably more complicated to apply in some service situation than those in manufacturing. Even where a process and goal exists some may argue that the setting of the specification limits can be somewhat a subjective issue and sometimes organizations spend time and money adding a specification value where one is not appropriate (Breyfogle et al, 2001, p196). This may be overcome by implementing a measurement systems analysis (MSA), however it must be noted that due to such issues, in services primary tasks may take longer than anticipated due to determining the appropriate measurement systems. (Breyfogle et al, 2001, p196).

The extent of six sigma use and thus difficulty is dependent on company objectives. The methodology can be used to bring quick financial savings early on by tackling what Breyfogle coins the obvious ‘low hanging fruit’ problems in an organization. By contrast it can also serve as a model for organizational culture –whereby everyone at all levels has a passion for continuous improvement with the ultimate aim of achieving virtual perfection (Basu & Wright, 2003, p3)

The unbelievable results achieved by the pioneers of the Six Sigma management methodology and implementation were not realized overnight. Concerted efforts of by the entire organization and unwavering support by top management over a long period of time are what it takes to see results. The employees of an organization, through specialized Six Sigma training, play key roles through 6 sigma implementation. The key players in 6 sigma implementation not only need specialized Six Sigma training, they also need a different mindset and dedication to the process (Tony Jacowski)

Despite its scientific approach towards quality improvement, there are criticisms against Six Sigma. The most vocal one is the viewpoint that there is nothing new about Six Sigma as it imitates already existing and proven techniques. To a certain extent, this argument has some credibility. But proponents of Six Sigma believe that as long as 6 sigma achieves more predictable results with far lower effort, there is no harm in accepting and implementing it. Criticisms notwithstanding, what Six Sigma does is apply concerted efforts at utilizing existing techniques with new approaches. (Tom Smith)

Tools and Techniques in Six Sigma

Check Sheet: The check sheet is used to collect data of the desired characteristics of a process that should be improved. If the collected data is incorrect, most efficient methods will result in a failure. In Six Sigma methodology it is used in the measure phase. The check sheet is represented in a tabular form. The check sheet should be simple and aligned with the characteristics that are to be measured.

Histogram: Histogram is used in Six Sigma in the analyze phase. It is used to learn about the distribution of the data collected in the measure phase. Often we have huge data and each observation cannot be represented in figure. With the help of histogram the collected data is divided into different classes or intervals. The area of each rectangle in the histogram is proportional to the number of observations within each interval or class. So if we sum the areas of all rectangles it is equal to total number of observations. When applying a histogram there should be at least 50 readings to get a good understandable

shape of distribution. The number of intervals or classes should be between 6 and 12. To get the intervals it is good to take the difference of highest and lowest value in the data. If there are too many or too less data values or intervals then the histogram will be of a flat or peaked shape.

Pareto Chart: There are several quality problems to be addressed in a project. Often the problems are solved one by one. The Pareto chart helps in deciding the order of problems in which they should be solved. Pareto chart is related to the 80/20 rule found in business economics. The 80% of problems are because of 20% of causes. In the Six Sigma methodology Pareto chart has two main functions. Firstly in the define phase it helps in the selection of the appropriate problem. Secondly in analyzes phase it helps in identifying the few causes that lead to many problems.

Cause and Effect Diagram: Once we have a quality problem its causes must be found. Cause and effect Diagram helps to find out all the possible causes of an effect (problem). It is the first step in solving a quality problem, by listing all the possible causes. In Six Sigma it is used in the define phase and analyze phase. The reason that Cause and Effect Diagram is also called Fishbone Diagram is that it looks like a skeleton of a fish. The main problem is the head of the fish, the main causes are Ribs and the detailed causes are the small bones.

Stratification: It is used to divide the collected data into subgroups. These subgroups help in finding the special cause of variation in the data. It provides an easy way to analyze the data from different sources in a process. It is used very less as compare to other quality tools but it is beneficial. In the Six Sigma methodology it is used in the improve phase. The collected data is usually stratified in the following groups: machines, material, suppliers, shifts, age and so on. Usually stratification is done in two areas but if the data is large than further stratification is also possible.

Scatter plot: It is used to define the relationship between two factors. Its main function is to identify the correlation pattern. The correlation pattern helps in understanding the relationship between two factors. In Six Sigma methodology it is used in the improve phase. Once you know the relationship between the factors then the input factor values are set in a way so that the process is improved. While constructing the Scatter plot the input variable is placed on the x-axis and the output variable is placed on the y-axis. Now the values of the variables are plotted and the scattered points appear on the figure. These points provide the understanding of the variables and the process can be improved. Often there are many variables affecting the process, in this situation a series of scatter plots should be drawn.

Control chart: It is also known as Statistical Process Control (SPC). In Six Sigma methodology it is used in analysis, improve and control phase. In analyze phase Control chart is helpful to identify that the process is predictable or not. In improve phase it identifies the special cause of variation. And in control phase it verifies that the process performance is improved. It shows graphically the outputs from the process in different time intervals. There are two main purposes of Control chart. First is the creation of a process with a stable variation. The second is to detect the change in the process i.e. alteration in mean value or dispersion.

Special Tools

The other methods are seldom used, but still very helpful. They are:

Project Management Methods: The project management skills can significantly help the Six Sigma improvement projects, such as project planning, project charter, scheduling, communication, HR management, and project management tools.

Failure, Effect and Mode Analysis (FEMA): The main work of FEMA is to assess risks and put efforts on controlling and minimizing risks. Before you work with those risks and identify their causes and effects, using flow chart to prioritize them in the timely sequence is a nice choice.

Stakeholders Analysis: Identifying the people who have a stake on the Six Sigma process improvement project. Those people will directly or indirectly influence the projects or results. The ones who are not satisfied will insist to changes.

Process Documentation: Effective, clear, comprehensive process documentation is very helpful for the Six Sigma projects, such as process maps, task instructions, measures, etc.

Analysis of Variance (ANOVA): It is a collection of statistical models which analyzes the variations presented in the project. It is used to assess the differences between groups of data.

Correlation and Regression: These tools assess the relationships (presence, strength and nature) among variables in process.

Design of Experiments (DOE): It is used to assess the performance of a process. Generally, it tests two or more characteristics under the different conditions. By comparing, the causes of a problem will be identified. It also can be used to optimize results.

Acceptance and Motivation of Six Sigma in Software Companies

Binder's View: Binder has pointed out three main difficulties. Based on the three difficulties, Binder claimed that Six Sigma is not applicable in software companies. The three difficulties are:

Processes- Software processes are fuzzy as compare to the manufacturing processes. So the application of Six Sigma is easily established and documented in manufacturing, not in software.

Characteristics- There are difficulties in meaningful measurements of software characteristics. Software cannot be measured as weight, distance, width, etc. Total number of faults cannot be measured in software.

Uniqueness- Manufacturing products are generally mass produced but software products are one-off. Binder's view is doubtable because only on the basis of three differences, he denied the applicability of Six Sigma in software. In order to identify the real situation, we need a comprehensive understanding about the differences between manufacturing and software.

Two Misconceptions Debunked by Tayntor: Managers cannot deny the importance of reducing defects, increasing customer satisfaction and operating more efficiently. Many

software companies are now adopting Six Sigma . Claimed by Tayntor , there are two misconceptions associated with Six Sigma in software companies. The first is that, Six Sigma is a statistical analysis, so it is applicable for manufacturing and engineering processes and it has very little or no relevance to software. The second is that Six Sigma cannot be adopted in just a few areas of the company. It should be applied to the entire company. Both these misconceptions should be debunked.

Why Software Companies Choose Six Sigma Approach?

After the above discussion one may ask if Six Sigma make sense in software companies. The answer is yes, Six Sigma is good for software companies especially for the following situations.

Legal Responsibility– Six Sigma approach helps to fulfill the legal responsibility. Now-a-days if something goes wrong people go to the lawyers according to Human Rights Act. Up to now disasters are not blamed on software s but software s can cause huge disasters. Software has many identical copies. These copies are installed in different companies. If there is some defect in the software then all the companies are at great risk of failure. Even the most powerful companies like Microsoft are fearful to such failures.

Mission Critical Systems– Now a day s software s are developing for mission critical systems. The failure of a mission critical results in a great loss to society. Here comes Six Sigma which means 3.4 defects per million opportunities, it can prevent the software from failing. In 1988, American Airlines lost 59 million dollars in ticket sales. The problem was the discount ticket was mistakenly blocked in the ticket reservation system. As a result travelers moved to their competitors. These weaknesses can be removed by Applying Six Sigma which provides near defect free performance.

Complex Systems– The application of Six Sigma is very effective in case of complex systems. For example there a complex system with like 1000 modules if all the parts are designed according to Six Sigma than there is a higher probability of getting a defect free system.

Software Company– Software companies have a bad reputation of buggy and late. Today software size is very large like more than thousands of lines. It has more probability of having many defects. In this situation Six Sigma can help us to get a near defect free product.

According to a survey conducted in software companies, the following results were found. Most software companies have completed five to ten Six Sigma projects and their bottom-line saving per project is over £100k on average. In most companies the Six Sigma level varies from 2.54 to 4 Sigma. The following criteria were used by most companies in survey to find the success of Six Sigma.

- Impact on bottom-line
- Reduction of defect rate.
- Reduction in cost of poor quality.
- Improvement in a process.
- Reduction in customer complaints

Objectives of the Current Study

The main aim of this paper is to provide steps for software companies interested in implementing Six Sigma for process improvement. Precisely the study has following broad objectives:

- Discuss the acceptance of Six Sigma in software companies.
- Screen out the suitable Six Sigma tools and techniques for software companies.

Research Methodology

A mixed methodology has been used which include both qualitative and quantitative research. In the qualitative research methodology part, a detailed and comprehensive literature study have been carried out. The literature study consists of articles, books, web materials, discussion forms and others. In the quantitative research methodology part, interviews have been conducted.

Analysis and Findings

In this section we present the experiences at Ericsson and Motorola.

Six Sigma at Ericsson

Ericsson is a worldwide provider of telecommunications equipment and related services to both mobile and fixed network operators. In Ericsson, there is a special department which is responsible for directing Six Sigma projects. Two kinds of characters are involved in this department – Black Belts and Green Belts. Both of them are full-time work. And also in middle management, 80% of managers have taken Six Sigma courses, 40% of them have got the Green Belt certification. Company's aim is to raise the percent up to 100%.

Define Phase

The main reason which leads to improvement is that the product has a high yield (9 million per month) with a low quality. The defects reach to 54420 PPM (parts per million) at the most. The SAP data from August to October has shown that the main cause of the low quality situation is because of part D. By identification, the source of problems is the CUTTING machine. After the problems are identified, we develop a Project Charter which includes overall commitment, such as Champion, Black Belt, and project team. Other information shall be involved too: project purpose, problem description, customer, goal statement, project scope & plan, project benefits, team selected, schedule, etc.

Measure Phase

In this phase, the causes of product defects are measured by using quality tools. In Figure, the main problem and its causes are demonstrated (Y s and X s). From that we can discover all the related factors. However, which factor has a stronger influence cannot be measured according to figure 1. XY Matrix can help to prioritize the causes. Furthermore, it can help to figure out which factors or Xs need to be put efforts for improving. In figure 1, the top six Xs of project xxx are calculated. They are:

- Conveyor Belt's work is not accurate.
- The problem of CUTTING machine's blade.
- The orientation of CUTTING JIG is not accurate.
- The orientation of material JIG is not accurate.

- Operation standards need to be perfected.
- Benchmarks are not clear which need to be unified.

These factors are the main causes which lead to defects. After we figure out the main causes, the related analysis for each cause can be processed. And also the specific improving method will be generated.

Analysis Phase

In this phase, six Xs are analyzed separately by using statistic and mathematic methods. Several analysis tools are used, such as 2-Proportion, regression analysis, Two-Sample Test, Kruskal-Wallis Test, etc. By analyzing, the sources of those Xs are identified. For example, the main cause of – Conveyor Belt s work is not accurate is because the position of conveyor belt. The higher position generates a lower defects number. –The problem of CUTTING machine s blade is related to CUTTING machine's running time. –Benchmarks are not clear needs the unification of benchmarks and the training for operators. The analysis phase not only requires that the Six Sigma team is familiar with the production processes, but also they need the feedbacks from the actual operators. This is a solid process, because some problems are hard to be identified. Statistic tool can be a good assistant. The whole analysis phase needs all team members to be careful and patient.

Improve phase

In the beginning of this phase, some CUTTING related experiences are designed and implemented. The aim of those experiences is to find an optimal solution. For example, we take an experiment to identify the influence of three factors – blade running cycle, blade running temperature, and JIG temperature. The result shows that the blade running cycle owns the greatest influence (see Figure below). Within the situation which is measured in experience, the optimal solution is to set running cycle equals to 5.3 days, blade temperature equals to 120°C, and JIG temperature equals to 80°C.

Experiment can help to testify the possible situations, and discover the optimal solution. It is a very good way to examine the result before we apply. All six Xs have been improved by different method. The total number of defects is 1238467 from August to October. After the improvement, it reduces to 170397. The decrease percentage highly reaches to 86.34%. This result shows the improvement activities can significant reduce the defect number.

In this phase, firstly experiences are designed and applied to verify the proposed changes. The optimal solution is selected. Then the proposed changes are implemented. In the end, the effect of changes is calculated by tools. This is very valuable for future analysis.

Control Phase

Before the Six Sigma project is terminated, a control strategy is developed which is used to avoid the same problem happen. In this project, several approaches are defined as the control strategy:

- Enhance operator s sense of quality.

- Conduct more training about standard operation.
- Improve CUTTING machine s automation ability.

After the strategy is defined, the Six Sigma project needs to be terminated. A terminate report is generated which contains the project terminate information, sigma calculation, and benefit estimation. It is directly reported to the top management.

Six Sigma at Motorola

Motorola is the original inventor of Six Sigma approach. Six Sigma approach is declared by Bill Smith who is the Quality Engineer in Motorola in 1986. The original purpose is to improve the manufacturing process. Now it is applied to all business process. The purpose is to show how Six Sigma approach is used for software quality improvement. The details of project activities are presented below.

DMAIC Model

DMAIC model is selected as the main improvement model. In following sections, main activities are summarized according to different phases.

Define Phase

Four activities are carried out in defined phase. The first one is to create a project charter. A project charter is very crucial for the project. A successful project charter help project to specify the right resources and boundaries. The necessary parts in this activity are to define project purpose, opportunity statement, project scope, project plan, project benefits and team selection. The project charter is used to get the commitment of all the team members and to facilitate the communication between them.

The second activity is to draw SIPOC which stands for Supplier, Input, Process, Output, and Customer. SIPCO uses a table to describe the suppliers of the resources, the inputs required by the process, the process description, the outputs from the process, and the customers. From SIPCO, we can easily identify the processes which need to be improved.

The voice of customers is the following activity. During this activity, the needs and expectations of the customer are analyzed. Kano analysis is used for this purpose. The analysis result shows customer requirements and expectations which is also the main purpose of improvement.

The last activity in this phase is Quick Wins, in which the process under consideration is decomposed. The scope of the project is further narrowed according to a particular division. Then tackle the first division. After that, the same process is repeated for other divisions. In this way lot of time is saved.

In this phase, not only project plan, scope and purpose are identified, but also they analysis customer's indeed requirements and expectations. That can validate the results in some extent. The chosen process (which is decided to be improved) is complex sometimes. Then they need to decompose it into smaller divisions. After all above, the project team can be formed. There is a very important condition, project goals and the chosen process must be clearly understood by each team member. Once the team is organized, the project can move to the next phase.

Measure Phase

The main activities in this phase are: identify what to measure, evaluate the measurement system, data collection, sources of variation, and sigma level calculation. In first activity, the current inputs, the process, and the outputs are documented. This activity helps to measure the problem in quantitative terms.

The second activity is to evaluate the measurement system. The measurement system is evaluated by looking at the following issues. The plan has to show works that have to be done, added or removed tasks which are handled as the project progress, and changes in project requirements.

The next activity is data collection in which the required data is collected. Once they have the data, they can display it graphically. The graphical display of data helps to find the sources of variation in the process.

The last activity of measure phase is the calculation of the sigma level. This phases main task is to measure the chosen process. Firstly they make sure what needs to be measured. Then answer the question – is the measurement system good enough? If not, then it needs to be improved first. After that, the measurement is started. The aim of measurement is to identify the sources of variations. At last, the sigma level of chosen process is calculated. This level is used for the result comparison.

Analyze phase

Once the source of variations are measured, the analyze phase is started. The main activity in this phase is to investigate the sources. This is done with Pareto Analysis's help. In Pareto Analysis, the relation of input and output variables is analyzed. That is to find out the areas that need to improve. The next activity is to find the co-relation between factors and defects, i.e. the correlation between release software size and defect injected. The last activity is to measure the quality from the customer point of view. This activity is very important for the test management, in order to plan the test time to reach the quality goals. It also helps to estimate when the goal is met. The variations and their sources are identified.

The analyze phase focuses on discovering the relations which includes the relations between input and output, factors and defects, etc. This helps the project team to conduct the related solution.

Improve phase

In improve phase the first activity is to identify solution alternatives. For this activity either the team involved in planning is trained, or the mentors or people from project office are approached. Then each of the solution alternatives is evaluated with respect to the required criteria. They are statistically analyze, the identification for relationships between input and output variables. The effectiveness of the solutions and the cost will mainly influence the consideration. After evaluation, the most suitable solution is selected, and finally the selected solution is implemented.

Several solutions are conducted to solve the specific problem. The first work is to select the best one and its backups. The main selection criteria are solution effectiveness and cost. Because it is hard to balance them, so sometimes the best one which is chosen firstly may not fit the situation perfectly. That is why they need backup solutions.

Control phase

Control phase's aim is to gain a long-term good performance. The first activity in this phase is the assignment of responsibilities. The solution is made part of normal practices. And responsibilities are given to team members for execution, evaluation and standardize the solution. The next activity is performance reviews. The performance reviews are very important to track the project and to evaluate the project success. Metrics are chosen for the review purpose, i. e. Fault Prediction Model and Defect Removal Model. The monthly performance reviews are done, which results in evaluating the long terms gains.

Good improvement result does not mean good long-term performance. Responsibility assignment and performance review protect the improvement result from two different ways.

Conclusion

Six Sigma is considered for business continuity management, since it deals so actively with process analysis and improvement, and it has benefits in a business process. When we compare Motorola's work of six sigma with Ericsson's project, there are some differences and similarities. The similarities are because they both choose DMAIC model as their main improvement tool. The differences happen for the reason that the fields are totally different. The main challenges of Six Sigma in software are to identify the CTQs (critical to quality) and to establish cost efficient project that can be used to identify root cause, and measure improvements. Another challenge is that the processes used have quite long life span (a development project can take 2-3 years) and the processes are furthermore not to be classified as stable and repeatable.

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Figure 1: Process Mapping for Six Sigma project at Ericsson.

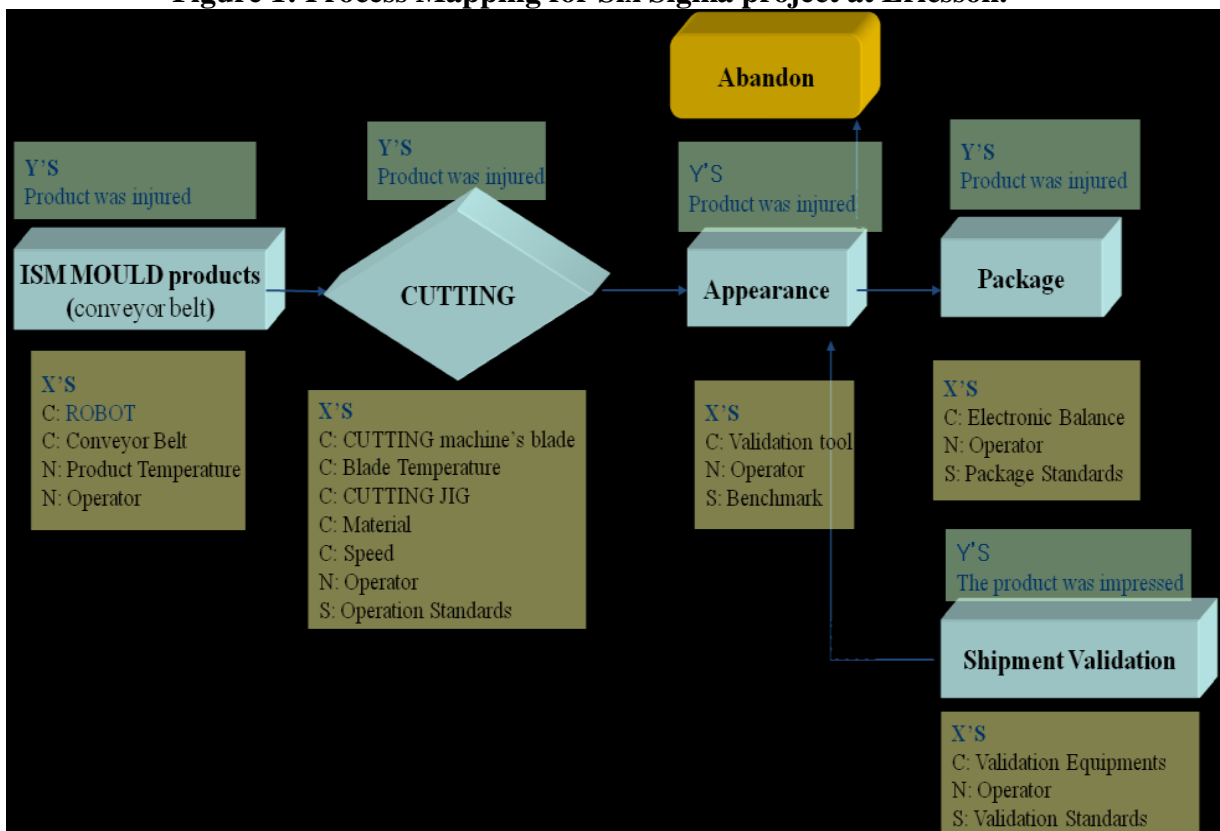


Figure 2: Using XY Matrix for defect causes analysis at Ericsson

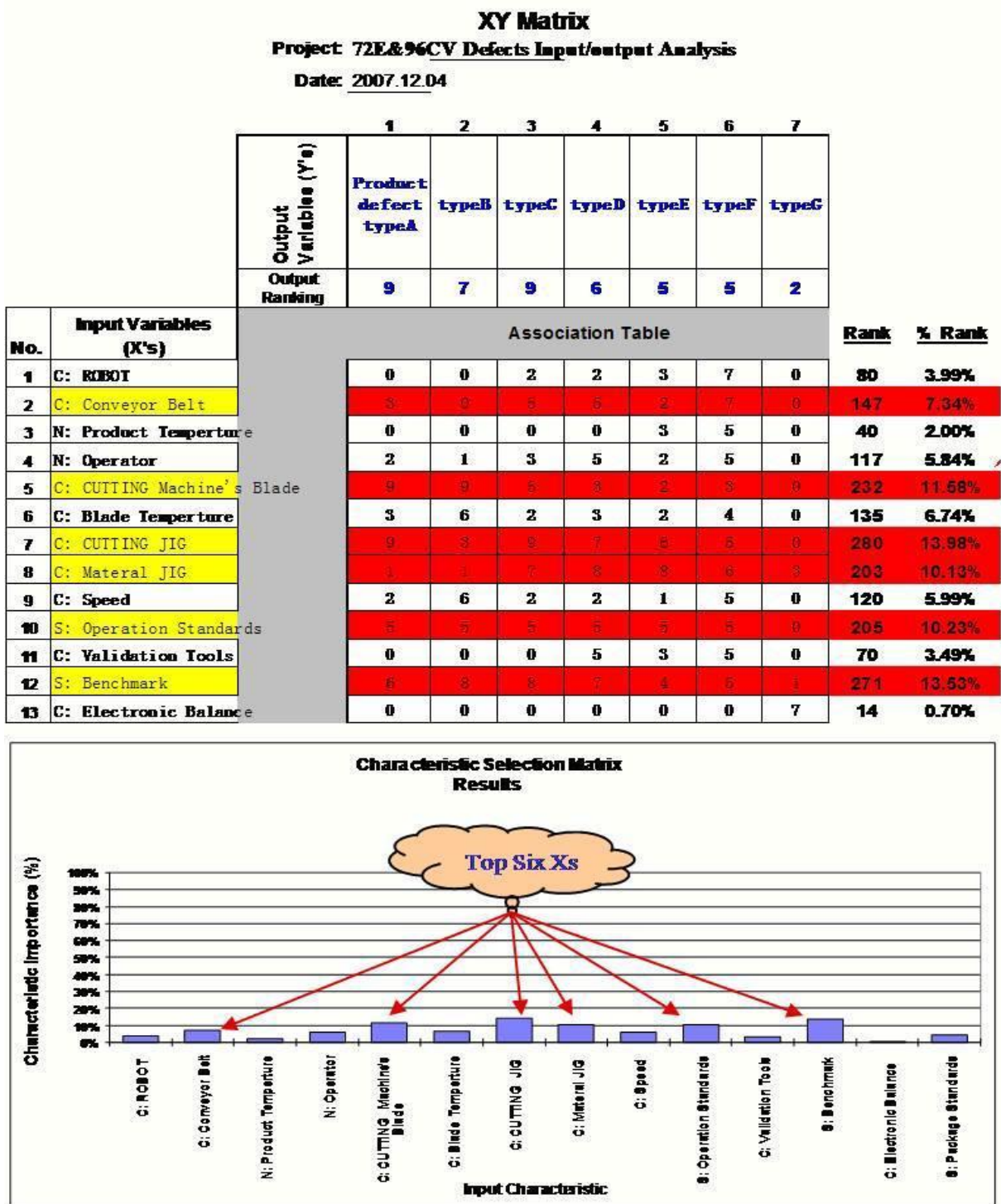


Table 1: SAP data from August to October(2004) in Ericsson

Group text	Good Qty	Defects Qty	Defects Number (PPM)
A	13958447	42122	3009
B	30249063	6145	203
C	25534200	1448855	53695
D	23286000	1267213	54420

Entrepreneurship Development in Rural Communities

Swamy Tribhuvananda H. V.^{*} & R. L. Nandeshwar^{**}

Abstract

The development of entrepreneurship can be a major means of fighting economic inertia in rural areas. In this paper, the researcher made an attempt to understand the determinant factors of entrepreneurial activity. 400 rural entrepreneurs were selected in 40 Villages of 8 Taluk in Karnataka State, India through multiple sampling methods. Research study involved an in-depth examination of entrepreneurial activity, socio-economic variables and motives associated with rural entrepreneurship. To conclude, the various motivational factors influenced the entrepreneurship activity and their development.

Keywords: Rural Entrepreneurs, Motivation and Entrepreneurial Motivation.

Introduction

After centuries of colonial rule, we started to think about ourselves as a Nation. We had made up our minds that India needs the goodness of both capitalism and socialism. Hence, we adopted a middle path called mixed economy. It was a partnership of private and government enterprises. Government concentrated on basic infrastructure, core industries and others were left to the private sector. The father of the nation, Mahatma Gandhi said that -India lives in villages. Following the vision of ramarajya, first five year plan was dedicated to agriculture. From there onwards, we have not looked back. However, the pace of development was so slow up to 1980, that the Westerners termed it as the -Hindu rate of growth.

Promoting entrepreneurship is viewed as part of a formula that will reconcile economic success with social cohesion (Organization for Economic Co-operation and Development, 1998). Raising employment levels and encouragement of new entrepreneurs were recognized as some of the main objectives of the Bank Nationalization in 1969. History has shown that societies where people had shown qualities of initiative, courage and a forward looking attitude have always been ahead of other societies. Jagadeesan and Santana Krishnan (2008), is of the view that -the development in rural India can only be supported by the growth of rural entrepreneurship.

Recent empirical research also has shown that people of more advanced and developed societies have evinced a greater degree of what is known as entrepreneurial qualities. In India also, a number of studies have proved that success in most fields is accompanied by a high degree of entrepreneurial qualities and the qualities of entrepreneurship can offset

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other disadvantages. With this background, the present research was undertaken. This study was aimed at assessing the relationship between Entrepreneurial activity and rural transformation. The paper, therefore, identified the factors influencing rural entrepreneurship amongst people in 40 villages of different taluk in Karnataka State.

Research Methodology

The study had to be descriptive against the backdrop of the fact that the researcher had no control over the scheme of the prevalent and evolving dynamics of the research environment. In this sense, the research effort has made a sincere attempt to measure and report the most relevant factors in an unbiased manner. The researcher has opted Descriptive Research method. The researcher has used survey with field visits to select villages of Karnataka State to collect data.

Data Collection Methods: The present study is based on both primary data and secondary data, in order to serve the purpose of the study and to achieve the research objectives. Primary data is gathered from the rural entrepreneurs spread across in different villages of Karnataka state using pre-tested structured questionnaire. One of the parameters by which the entrepreneur was chosen to be depicted is the age of business. The entrepreneurs are chosen with minimum criteria that at least they should be of one year of existence in business.

Sample Units/Respondents: It consists of Entrepreneurs in Villages. The sample units for gathering the primary data, keeping in view the nature of the research problem and objectives have been decided to have the person involved in economic activity like Fertilizer, renting Farm equipment, Seeds, Dairy activities, Grocery, General store, Garments Shop, Garage, Chemist, Shoe store, Electronic goods, Commission agents, Sanitary goods, Tailor, Utensil store, Parlor, Goldsmith, Blacksmith, Carpenter, Cycle repair, Photographer, Sweet shop, Electric Shop, Tent house, Flour mill, PCO, Tea shop, Stationary Shop, Hotel and other similar business activities.

Results and Discussions

Demographic Variables: Detailed analysis revealed that 88.8 percent of the respondents were male while 11.2 percent was female. About 88.5 percent was ascribed to those who were married, 9.5 percent to the unmarried and 2 percent to the widow / widower. 50 percent of respondents belong to the family size of 2-5 members and 40.3 percent to the Over 31 percent of the respondents had secondary level schooling and 24.8 percent Pre-University and 23.5 percent had primary schooling. 63 percent own agriculture land. 69.5 percent of the respondents are first generation entrepreneurs.

Socio-economic Variables: 71 percent respondents have no previous job experience. 44.3 percent of the respondents got business information through newspaper, 42 percent by visiting market place and 62.5 percent through friends and relatives. The significant proportion of entrepreneurs under study- 31.50 percent- entrepreneurs had existence in business for more than seven and above years. The next category of entrepreneurs is between three years and five years accounted for the second highest category with 30.50 percent. The shortest of all is between one year and three years with 18 percent. About

54.5 percent of respondents said that their initial investment to the business is less than Rs. 25000/-.

41.5 percent of respondents agree that their income from entrepreneurial activity is between Rs. 25001/- to Rs. 75000/-. About 65.5 percent of entrepreneurs generated at least one employment to the maximum of 6.

69.7 percent of entrepreneurs own two wheelers, 70.3 percent have mobile connection, 76.5 percent have LPG connection, 74.8 percent of entrepreneurs own house, 82.5 percent have television set for entertainment. 24.5 percent of entrepreneurs are willing to look for new opportunities along with the existing one.

Factor Analysis

–Often among the many variables you measure, a few are more related to each other, than they are to others. Factor Analysis allows us to look at these groups of variables that tend to relate to each other and estimate what underlying reasons might cause these variables to be more highly correlated with each other. Jeff Miller, Vice President, Consulting and analytical, Burke, Inc. (Source: Marketing Research, Naresh K Malhotra).

This tool of SPSS was extensively used to classify a large number of variables into smaller number of factors. Factor analysis was used to determine whether there was any common constructs that represented entrepreneurial motives. 34 variables were analyzed using the Varimax rotation, the most commonly used method. Factor analysis was done using principal component analysis.

Bartlett's test of sphericity and Kaiser Meyer Olkin (KMO) measure of sampling adequacy were used to examine the appropriateness of factor analysis. The approximate chi-square statistic is 5463.421 with 561 degrees of freedom with p value 0.000. The KMO statistic (0.828) is also large (>0.5). Hence, factor analysis is considered an appropriate technique for further analysis of data.

Table 2 shows the results of varimax factor rotation pattern, in which the variables that had high loadings on each of the eight factors extracted in the analysis. Retaining only the variables with Eigen values greater than one (Kaiser's criterion), we can infer that 19.19 percent of variance is explained by factor 1; 12.56 percent of variance is explained by factor 2; 8.77 percent of variance is explained by factor 3; 6.24 percent of variance is explained by factor 4; 4.81 percent of variance is explained by factor 5; 3.61 percent of variance is explained by factor 6; 3.45 percent of variance is explained by factor 7 and 3.13 percent of variance is explained by factor 8 and together, all the factors contributed to 61.75 percent of variance. On the basis of Varimax Rotation with Kaiser Normalization, 8 factors have emerged. Each factor is constituted of all those variables that have factor loadings greater than or equal to 0.5. Factors extracted were labeled or named based on the researcher's subjective interpretation of experiences from literature and joint explanation or interpretation of the meaning of the highly loaded variables on each factor.

Table 3 shows the eight (8) major factors derived with their latent roots as they associate with motivation. The factors extracted are Lucrative Business Environment (19.19%),

Opportunity to generate additional income (12.56%), Community affiliation (8.77%), ability to cope with changing trends (6.24%), self-orientation (4.81%), owning family responsibility (3.61%), family tradition (3.45%) and ability to mobilize the resources (3.13%). About 61.75 percent of the variation was explained by the eight factors. 38.25 percent of variation was explained by unknown factors. This relatively high value of the unknown factors may have been due to the influences of the myriad of indicators, which could not be individually isolated.

Conclusion

It is obvious that motivation is an essential part of all successful entrepreneurs. One or more factors together influence Entrepreneurial activities in villages. –Lucrative Business Environment, –Opportunity to generate additional income, –community affiliation, –ability to cope with changing trends, –self-orientation, –owning family responsibilities, –continue family tradition and –ability to mobilize the resources are the eight motivational factors, which energizes the rural entrepreneurs. It might be comforting to conclude that the success of business venture or long term survivability of business totally depends upon the nature of entrepreneur motivational factors.

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Table – 1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.827956
Bartlett's Test of Sphericity	Approx. Chi-Square	5463.421
	df	561
	Sig.	0.000

Table - 2: Rotated factor matrix for respondent's motivational factors associated with entrepreneurship

		Factors							
Variable		1	2	3	4	5	6	7	8
3.	Market was Less Competitive	0.749	-	0.182	0.013	0.045	0.040	0.054	0.028
4.	Circumstances / situations are conducive to become entrepreneur	0.724	0.060	0.118	0.106	0.095	0.111	0.194	0.144
6.	Ample Opportunities were available	0.698	0.004	0.033	0.016	0.006	0.121	0.065	0.197
8.	Favorable Demographic and economic factors	0.674	0.251	0.005	0.053	0.031	0.002	0.281	0.034
5.	Impressive profit attraction	0.625	0.025	0.091	0.001	0.137	0.325	0.177	0.012
2.	I was having better exposure / informed, so I thought of seizing that opportunity	0.612	0.004	0.318	0.050	0.002	0.156	0.178	0.167
10.	To have self-dependent life	0.321	0.247	0.030	0.155	0.227	0.243	0.212	0.091
26.	Opportunity to utilize the profits for agricultural purpose	0.128	0.786	0.045	0.027	0.103	0.046	0.006	0.063
27.	This is one among different employment opportunities	0.054	0.701	0.254	0.226	0.231	0.172	0.165	0.008
30.	Need for dominance	0.221	0.662	0.256	0.103	0.030	0.038	0.060	0.320
18.	I had Economic / financial stability	0.286	0.553	0.219	0.297	0.232	0.041	0.130	0.038
29.	Fluctuations in income / To avoid seasonal income (income variations)	0.185	0.485	0.298	0.124	0.152	0.321	0.134	0.289
19.	Encouragement from friends and relatives	0.103	0.148	0.760	0.115	0.060	0.049	0.039	0.019

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28. This was my last option / resort in life	-	-	-	-	-	-	-	-
	0.123	0.050	0.634	0.172	0.010	0.223	0.120	0.287
32. Passion for work (Motivation to do the business)	-	-	-	-	-	-	-	-
	0.500	0.052	0.606	0.010	0.034	0.176	0.196	0.046
34. Support and encouragement from NGOs	-	-	-	-	-	-	-	-
	0.019	0.482	0.559	0.064	0.243	0.039	0.010	0.186
31. Need to shape my life	-	-	-	-	-	-	-	-
	0.394	0.090	0.500	0.031	0.007	0.425	0.016	0.043
33. Self efficacy (beliefs about their capabilities)	-	-	-	-	-	-	-	-
	0.472	0.054	0.485	0.090	0.033	0.074	0.057	0.216
16. I was having specialized expertise in technical Know-how	-	-	-	-	-	-	-	-
	0.061	0.059	0.109	0.838	0.127	0.061	0.024	0.028
9. Technological developments / advancements	-	-	-	-	-	-	-	-
	0.143	0.035	0.065	0.756	0.167	0.046	0.129	0.062
15. I was having Business expertise	-	-	-	-	-	-	-	-
	0.071	0.207	0.007	0.701	0.081	0.270	0.027	0.018
14. I was having Innovation motive	-	-	-	-	-	-	-	-
	0.180	0.393	0.423	0.543	0.240	0.076	0.041	0.039
20. I had Joint family background	-	-	-	-	-	-	-	-
	0.092	0.055	0.123	0.463	0.140	0.280	0.157	0.102
17. Previous Experience	-	-	-	-	-	-	-	-
	0.089	0.428	0.436	0.452	0.112	0.049	0.002	0.065
22. Possessing Knowledge of different languages	-	-	-	-	-	-	-	-
	0.127	0.040	0.033	0.386	0.714	0.079	0.011	0.157
21. Possessing required qualification / education	-	-	-	-	-	-	-	-
	0.063	0.011	0.232	0.407	0.679	0.004	0.071	0.139
23. I had the support / influence of Politician	-	-	-	-	-	-	-	-
	0.087	0.142	0.014	0.033	0.598	0.042	0.128	0.101
24. Encouragement from Govt. Policy/ Schemes	-	0.527	0.043	-	0.584	-	0.014	-

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	0.010				0.009		0.139		0.146
25. Need for social security					-			-	-
	0.057	0.313	0.411	0.193	0.449	0.344	0.047	0.139	
13. To Safe guard against uncertainty in life					-				
	0.250	0.164	0.115	0.075	0.033	0.685	0.101	0.016	
11. Responsibility of family		-							
	0.275	0.113	0.226	0.088	0.003	0.656	0.023	0.065	
7. To continue family tradition		-	-						
	0.053	0.193	0.052	0.238	0.180	0.022	0.768	0.044	
1. Opportunity to create own Destiny (Achievement motivation)			-	-		-	-	-	
	0.273	0.325	0.012	0.068	0.090	0.072	0.728	0.043	
12. I was having the ability to organize and administer factor of production				-	-				
	0.087	0.173	0.071	0.013	0.027	0.034	0.066	0.825	

Source: field survey 2009

Table - 3: Principal component analysis of independent variables associated with motivation to become entrepreneur.

Factor Identified	Variables loading above 0.5	Loading	% of Variance	Cumulative % of Variance
Lucrative Business Environment	3. Market was Less Competitive	0.749	19.19	19.19
	4. Circumstances / situations are conducive to become entrepreneur	0.724		
	6. Ample Opportunities were available	0.698		
	8. Favorable Demographic and economic factors	0.674		
	5. Impressive profit attraction	0.625		
	2. I was having better exposure / informed, so I thought of seizing that opportunity	0.612		
Opportunity to generate additional income	26.Opportunity to utilize the profits for agricultural purpose	0.786	12.56	31.75
	27.This is one among different employment opportunities	0.701		
	30.Need for dominance	0.662		
	18.I had Economic / financial stability	0.553		
community affiliation	19.Encouragement from friends and relatives	0.760	8.77	40.52
	28.This was my last option / resort in life	0.634		
	32.Passion for work (Motivation to do the business)	0.606		
	34.Support and encouragement from NGOs	0.559		
	31.Need to shape my life	0.500		
Ability to cope with changing trends	16.I was having specialized expertise in technical Know-how	0.838	6.24	46.76
	9. Technological developments / advancements	0.756		
	15.I was having Business expertise	0.701		
	14.I was having Innovation motive	0.543		

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Self Orientation	22.Possessing Knowledge of different languages	0.714	4.81	51.57
	21.Possessing required qualification / education	0.679		
	23.I had the support / influence of Politician	0.598		
	24.Encouragement from Govt. Policy/ Schemes	0.584		
Owning family responsibility	13.To Safe guard against uncertainty in life	0.685	3.61	55.18
	11.Responsibility of family	0.656		
Family Tradition	7. To continue family tradition	0.768	3.45	58.62
Ability to mobilize the Resources	12.I was having the ability to organize and administer factor of production	0.825	3.13	61.75

Source: Field Survey, 2009

Human Capital Management: A Comprehensive Approach to Augment Organizational Performance

Aishwarya Mehta*

Abstract

Contemporary business firms across the globe are facing the most pressing challenges directly related to human capital management thanks to ever changing characteristics of the environment: enhanced globalization, evolving demographics, the need for more competencies and motivation. Highly demanding business environment makes it imperative for the organizations to build competence in the form of superior intellectual capital for higher level of performance. Hence Human Capital Management has assumed significance in recent times. This paper unfolds the facets of Human Capital Management and builds a case for integrated talent management model to nurture the employees in a holistic manner.

Keywords: Human Capital Management, Integrated Talent Management Model, Organizational Performance

Introduction

Changing demographics of the labour market, enduring skill shortages and employee demands for work-life balance have created a so-called 'War for Talent'. In this 'War for Talent', successful organizations aim at improving their strategies, policies and practices for attracting, developing, deploying and retaining vital talent for their business needs. Therefore they have to understand the capabilities needed in their organization and determine the actual or potential talent required. According to Leigh Branham, Vice President, consulting service at Right Management Consultants and author of the book, -Keeping People Who Keep You in Business, -A Talent is not rare and precious. Talent is behavior; things we do more easily than the next person. Talent, however, cannot be taught. As someone once said, -you can teach a turkey to climb a tree, but it is easier to hire a squirrel.

Talent management is difficult to define because it's a complex undertaking and organizations find greater value in formulating their own meaning of what talent is than accepting universal or prescribed definitions. Considerable differences have been observed in how talent is defined across different industries and sectors. It is helpful to start with a broad definition and, from our research; we have developed a working definition for both 'talent' and 'talent management':

Talent consists of those individuals who can make a difference to organizational performance, either through their immediate contribution or in the long-term by demonstrating the highest levels of potential. Talent management is the systematic attraction, identification, development, engagement, retention and deployment of those

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individuals who are of particular value to an organization, either in view of their ‘high potential’ for the future or because they are fulfilling critical roles.

This definition underlines the importance of recognizing that it is not enough to just attract individuals with high potential. Developing, managing and retaining individuals as part of a planned strategy for talent management is equally important, as is adopting systems to measure the return on this investment. Many organizations are now broadening their definitions, looking at the ‘talent’ of their workforce and working on ways to develop their strengths.

Talent can be best described as a combination of abilities and attitudes. The real trick is to match the right motivated talent to the right role, individually and collectively, harnessing and harmonizing this crucial attribute to achieve the objectives of your company. We hire people, or ‘talent’, out of a need to drive organizational performance. Talent Management is best defined as: *The activities associated with attracting, hiring, training, developing, and managing an organization's people for the purposes of maximizing organizational performance*

Results are king. Obtaining desired results rests on aligning and integrating the key components of talent management. It isn't enough just to hire great people or to develop great people. With great people and lousy results, you still have a lousy company. Talent management refers to the process of developing and integrating new workers, developing and keeping current workers and attracting highly skilled workers to work for the company. The process of managing, the supply and the demand of employee's talent, to achieve optimal business performance in alignment with organizational goals.

Talent management can also be termed as HCM (Human Capital Management). Companies that are engaged in talent management (human capital management) are strategic and deliberate in how they manage the ‘High-worth Individuals’ in the organization. This term also incorporates how companies drive performance at the individual level. Talent is usually associated with competency-based human resource management practices. The competency set may include knowledge, skills, experience, and personal traits (demonstrated through defined behaviors).

Companies today have become fiercely competitive when it comes to attracting and retaining talent and employee retention is a major concern, the obvious reason being the ‘increasing rate of turnover’. This dynamically changing and volatile demand-supply equation with such erratic attrition trends and cut throat competition has led organizations to focus on mechanisms pertaining to talent management. It is an accepted truth that turnover will happen and companies need to devise a strategy to curb unprecedented turnover from affecting organizational success. People tend to seek change for a variety of reasons—more money, better benefits, the appearance of a greener pasture- and this has been a practice from the very beginning. Then, what is it that has really changed? Despite intense competition being the key to market development and success, organizations have failed to identify some of the major reasons which highlight why ‘good performers’ leave.

One major reason why people leave their organization is because of the organization's failure to bring about a correlation between pay and performance. Experts in the industry believe, matching the, right blend of talent with the right job profile can lead to superior

performance. The present scenario with abundant opportunities has triggered a wave of employees, perpetually –on the move, forever seeking better opportunities whenever, wherever and however they can. What is behind the restlessness of these hard to keep employees? By focusing on productivity, organizations are realizing that it is imperative to hire employees who can do the job and be successful at it. The organization no longer wants to just hire, in fact they are striving to find the right people, bring them into the organization and retain their services. The paper attempts to address the following questions:

- The meaning and nature of talent management in organizational contexts?
- To identify the ways to retain the best talent.

To identify various upcoming key challenges faced by organizations in their approach to talent management?

- To establish upcoming trends in talent management

What are the measures of success/critical success factors for talent management initiatives for both the management of the organization and its employees?

What are the solutions envisaged or currently in place for ‘operationalising’ talent management initiatives?

Need for Talent Management

The idea is to capture the right talent, convert them by providing appropriate developmental opportunities, to help them take on key positions in the organization. Dramatic shifts in the make – up of the workforce can influence the way organizations manage the future talent. The supply side puts pressure on companies to attract the best talent and ensure that employees join the company and choose to stay in the organization rather than look for opportunities elsewhere. Present study is supposed to find out the existing global talent scenario so as to analyze its emerging challenges and trends.

Regrettably, this situation is not unusual in many organizations today. Indeed, many companies are missing substantial opportunities to save costs and improve performance by upgrading their talent management capabilities. Companies can take up steps to quickly assess their talent management process and begin improving their competency.

Talent Management a Top Concern

Finding, developing and keeping talent are among the top concerns for HR executives according to a survey released by ORC Worldwide, a New York-based provider of human resource management. Talent management implies recognizing a person's inherent skills, traits, personality and offering him a matching job. Every person has a unique talent that suits a particular job profile and any other position will cause discomfort. It is the job of the Management, particularly the HR Department, to place candidates with prudence and caution. A wrong fit will result in further hiring, re-training and other wasteful activities. Talent Management is beneficial to both the organization and the employees. The organization benefits from: Increased productivity and capability; a better linkage between individuals' efforts and business goals; commitment of valued employees; reduced turnover; increased bench strength and a better fit between people's jobs and skills. Employees benefit from: Higher motivation and commitment; career development; increased knowledge about and contribution to company goals; sustained motivation and job satisfaction. But it is the talented workforce that is very hard to find. The biggest problem is how to retain the present workforce and stop them from quitting?

The Focus of Talent Management

At the heart of talent management is developing the following intrinsic human capacities:

1. Capacity to learn (measured as learning quotient LQ)

Enhancing an individual's capacity to learn improves the person's awareness. It adds to the person's quest to know more and delve into new areas. This is developed by holistic education, an enabling environment and good mentoring. Capacity to learn comprises of the following: Introspection is the individual's willingness to look back, learn from mistakes and identify areas of improvement. Reflection and contemplation is the individual's ability to observe his own thoughts, actions and emotions/feelings and using the awareness to improve further and perform better.

2. Capacity to think (measured as conceptual quotient CQ)

An individual's quest to know more leads his mind to create images. Enhancing an individual's capacity to think helps the person not only to take learning to a higher level of intellect but also improve creativity. Capacity to think comprises of the following: Analysis is about asking the right questions and breaking complex things into simpler elements. Creativity is about generating new thoughts and breaking the existing patterns of thought. Judgment requires both, helping an individual take quality decisions.

3. Capacity to relate (measured as relationship quotient RQ)

It is important for an individual to be able to relate to his learning and thoughts and to the environment around him. The outcome is a sense of belongingness and an environment of trust at the organizational level and team spirit at the individual level. Capacity to relate comprises of the following: Active listening is the individual's ability to listen with warmth & respect, free of biases, evaluation and pre-conceived notions. Empathizing is the ability to put self in someone else's shoes. Trust requires a combination of both empathizing and listening. It is about authenticity, openness and genuineness.

4. Capacity to act (measured as action quotient AQ)

Action is how the above three capacities of an individual are manifested. It is the individual's ability to enact his intentions. Following are components of capacity to act: Organizing refers to the individual's ability to organize time and resources so as to enable him to convert intentions into reality. Implementing means delegating, attention to details, and focus on the right process. Perform under pressure is the ability to work under time constraints and handle multiple tasks without stress. The individual's values help in discriminating amongst alternatives and act as the bedrock for decisions. They act as multipliers in enhancing the individual's capacities, a sigma of which reflects the individual's true talent.

*Thus: $(LQ + CQ + RQ + AQ) * Values = Talent$*

Organizations provide individuals the opportunity and space for physically manifesting their talent into performance for achieving individual and organizational vision. Talent manifests into performance as follows:

- Talent
- +Vision/Mission/Strategy
- +Skills & Competencies
- +Role & structure
- +Opportunity

- +Encouragement & Recognition
- +Training & Development
- +Coaching
- +Action Plan & Goals
- +Resources

Thus the domain of talent management focuses not only on development of individual's intrinsic capacities, but also on culture building and change management to provide the other elements listed above for manifestation of talent into performance.

Talent Management Components

As noted, talent management centers on the activities employed to maximize performance for the organization. Simply put, if an activity is core to driving human performance, it likely falls under talent management. In my opinion, the core components of talent management include the following:

Strategic Workforce Planning: This first stage in talent management addresses the question, –What are the needs and goals of our organization?‖ As Stephen Covey said, effective people begin with the end in mind. This holds true for talent management. During strategic workforce planning, the organization determines the –talent gap‖ and seeks to close that gap via talent management. The organization will find that it needs key people to accomplish key tasks. Those people may or may not be within the organization. Regardless, the next step is total talent acquisition. Importantly, these steps must be integrated. A superior talent management program links the planning stage to the talent acquisition stage.

Total Talent Acquisition: Most have heard of talent acquisition and many associate it with the use of an applicant tracking system targeted at hiring full time people. However, effective talent management comes from focusing on total talent acquisition- and integrating it. There are various pools of talent available to companies and organizations. Examples: Internal Employees; External candidates for full time positions; Contingent workers; Offshore labor.

Total talent acquisition recognizes that anyone doing work for the organization should be considered talent and thus, is incorporated (at least to some degree) in talent management. Integration within this component is crucial. Today, most organizations fail to address total talent acquisition from a comprehensive perspective and integrating the strategy, sourcing, and evaluation efforts of the talent pool leads to great inefficiencies and lost opportunities to maximize performance. Once the organization acquires needed talent, it must ensure that it is poised for success.

Employee Development: –Will our people be prepared and able to deliver the results we expect?‖ Integrating employee development with total talent acquisition provides an obvious benefit. Organizations must understand each person's ability as it relates to the core competencies identified in strategic workforce planning. Personal profiles and resumes contain much of the information that needs to be considered in employee development. Garnering data from the talent acquisition enables the organization to focus on a tailored development plan for each employee, thus increasing the probability of success.

Employee development isn't simply a stage that happens and then ends. Rather, it continues and more importantly starts after talent acquisition. There are various sub-components that should also be integrated with each other. How do organizations get their

people –up to speed?|| They do it by setting up activities and tasks that will promote the culture and job at hand. On-boarding is an excellent example. On-boarding is the process of getting –talent|| to the point where contributions are meaningful and sustainable. Orientation, training, eLearning, mentoring, are examples of On-boarding components. Once we’ve effectively determined that our people know what is expected of them and we have helped develop them so they can be successful, we need to hold them accountable for results and manage performance.

Performance Management: –Are the people getting the results we need?|| Linking employee development activities and goals to performance management makes sense. Many organizations today are conducting their 360 feedback surveys and performance reviews manually and not leveraging the technology available that ties these relevant components together. Motivating managers to conduct performance management in a thoughtful and deliberate manner is crucial. Performance management ensures the organizational goals are met and it promotes meaningful communication which in turn, promotes retention and high morale.

Unfortunately, many organizations have performance management policies and procedures in place but they are loosely followed by those responsible for administering them. Getting managers and users to adopt performance management can be a crippling challenge. However, superior talent management initiatives increase usage and adoption by employing technology that makes the process easier and integrates to the various activities and tasks that comprise performance management or appraisal process. With strong performance management, organizations greatly increase the odds of achieving corporate goals and objectives. If done properly, success is all but guaranteed. However, talent management is not complete. Savvy organizations think ahead and prepare for the challenges of tomorrow.

Succession Planning: Every organization has key people and positions those are important for the success and achievement of its goals. Simply achieving goals isn’t enough but being prepared for the next wave of talent challenges is also important. There are plenty of organizations that fail to address succession planning. Serious talent management advocates proactively identify key people in the organization and develop a plan to manage people and positions. Employing a technology solution can facilitate this process and will mitigate obstacles and having a system that links the other components vastly increases organizational commitment to succession planning and streamlines the process. Managing a great talent management program will optimize organizational performance. The winners in the war for talent will be those who invest time to define a talent management strategy and process for all of the components. Organizations must look at talent management holistically vs. departmentally. It must be part of the culture vs. an HR program. Companies and organizations that adopt this perspective and implement talent management software that integrates the key components will be few. There will also be light years ahead of those in the market competing for talent.

Problem Identification: The Challenge

It takes talent to spot Talent! A tone deaf will never be able to appreciate the music of maestros. Only a seasoned jeweler would know that all that glitters is not real! And, only those who can recognize the worth of a diamond can value it, for others it's just a stone! Talent is doing easily what others find difficult. In an organization, there is nothing more crucial than fitting the right employee in the right position. Or else you would be trying to fit a square peg in a round hole. When people do jobs that just don't suit their liking,

inclination or temperament, the results, will be disastrously obvious. Low productivity, dissatisfaction, low morale, absenteeism will become typical till the employee is shown the door. Or perhaps, there is another option – Talent Management

–A conscious, deliberate approach undertaken to attract, develop and retain people with the aptitude and abilities to meet current and future organizational need”. Organization need to have a vision and a well-defined strategy on hiring for the future. India has become the outsourcing capital of the world and this has created its own set of HR challenges. So, do we have the right talent within to attract and retain the best available talent? The challenge of talent management has two facets to it. First is how to find new people and second is how to retain the present workforce. Each of the challenges has to be tackled in the most efficient way possible so that the organization can achieve its objectives.

Where to find new talent?

Organizations are finding loads of business opportunities and consequently, their revenues are growing at a rapid pace. The increasing business opportunities has necessitated that these organizations go in for massive recruitment. But, the question is where to find the best talent which is able to fit the job description and also adjust to the organization's values and norms. If we scan the environment, we find there is a shortage of skilled workforce.

How to retain the existing employees?

Unlike the immovable Banyan Tree, one cannot stay rooted in one place, though it's a fact that people add value to organizations they need to move on for one reason or another, and the organization stands to lose. Let us look at some of the reasons behind the massive attrition rates: -

Gap between organizational and the individual values and goals is one of the major reasons. If they go parallel, there is no way both would be satisfied and inevitably, the organization would lose out on a talented employee. In this knowledge era employees demanding creative and a democratic work environment is another major factor. Failure on the part of the management to provide such an environment will result in a talented employee leaving the organization. The competitive world has made sure that there is high work pressure on the employees which leads to psychological problems like stress, and other health related problems.

Movement for higher salary is also very common among professionals. There is no shortage for organizations who are looking for talented employees and who are ready to shell out a hefty salary for a talented person. Other lures like better job opportunities, higher posts and overseas assignments are also major factors in the attrition rates. Not taking proper care during the recruitment and selection process and not taking proper care to fit the right person to the right job also breeds dissatisfaction among the employees. Mismanagement on issues of succession planning and promotion is also a major factor.

Retaining the present employees is of foremost importance to the organizations because if it has to look for a replacement for the employee who has left, it involves a lot of costs like - hiring costs, training and development and the induction costs. It also takes some time

for the new employee to adjust to the new work environment. During this time the productivity of the employee will be low. The HR department will have to fit the new employee into a proper role in the organization. Apart from causing the company a monetary loss and breaks in their day-to-day operations, attrition contributes to knowledge transfer, which is a great loss and adversely affects business.

How to Manage the Talent?

In the era of technology and knowledge, it has been proved beyond doubt that talent is in the driving seat. It is the demand of time that business leaders elevate management of talent to a burning corporate priority. It is not a walk in the park for the talent market. Quality people are no longer available in plenty, easily replaceable and relatively inexpensive. Here are some measures that should be taken into account by organizations, to be efficient and competitive in this highly competitive world: -

Hire the Right People: Proper care must be taken while hiring the people. It would be beneficial for an organization to recruit young people and nurture them, than to substitute by hiring from other organizations. Questions to be asked at this stage are: Whether the person has the requisite skills needed for the job? Whether the person's values and goals match with those of organizations? Care must be taken to fit the right person to the right job.

Keep the Promises: Good talent cannot be motivated by fake platitudes, half-truths and broken promises. Unfulfilled expectations can breed dissatisfaction among the employees and make them either leave the organization or work below their productive level. Promises made during the hiring stage must be kept to build loyalty among the employees, so that they are satisfied and work to their fullest capability.

Good Working Environment: It has to be accepted by the organizations that highly talented people make their own rules. They have to be provided with a democratic and a stimulating work environment. The organizational rules must be flexible enough to provide them with freedom to carry out their job to their liking, as long as the task is achieved. Opportunities should also be provided to the employees to achieve their personal goals.

Recognition of Merit: It is highly motivating for any person if his talent is recognized and is suitably rewarded. One way is providing them with salary commensurate with their performance, giving promotions and incentives based on performance. Another way is by providing them with challenging projects. It makes employee feel that he is considered important (a highly motivating factor) and gets the work done in an efficient manner and brings out the best in the employee.

Providing Learning Opportunities: Employees must be provided with continuous learning opportunities on and off work field through management development programmes and distance learning programmes. This will also benefit the organization in the form of highly talented workforce.

Shielding from High Work Pressure: If an organization has to make the most of the available talent, they should be provided with adequate time to relax, so that they can

distress themselves. It is very important to provide them with holidays and all-expenses-paid trips, so that they can come back refreshed with increased energy. Recreation clubs, entertain programmes, fun activities within the work area will also reduce the work life stress of the employees and develop camaraderie among the workers and result in a good working environment.

Hype or Reality?

So how does your workplace stack up on the practices that matter most to creating an enriching workplace? Are job stretch and mobility, freedom and stimulation and horizontal growth paths the exception or the rule at your employer? Are mentoring, teaching and coaching rare or pervasive throughout your organization? Is diversity merely an overused word in your company's communications or a real principle on which your organization operates every day?

Targeted Talent Management

Most large organizations talk about Talent Management as part of their strategy. It is a crucial way of securing, developing and motivating people with the right skills and approaches to meet business objectives. But how many of our strategic goals are fully met by our talented people? Too often, we find that we don't have the right people in place to fill a gap when it appears, or we simply can't keep hold of the individuals we want. Even worse, talented people may simply not be operating at the levels we require. So what can we do to seize these missed opportunities?

A wide range of people processes often take place without a clear relationship with the ultimate aim and culture of the business. Think about recruitment, performance management and development - to what extent are these processes based on a clear analysis of the talents and skills that people will need to operate at the next level? To what extent do you build people's capability and motivation to meet the needs of the business in a few years' time? It is vitally important to build a clear definition of what each organization really mean by talent. The acid test is simple - do people with these qualities deliver the kinds of business success we are aiming for?

It is vitally important that individual aspirations and organizational goals are delivered together. Too often, these are seen as unequal partners. However, organizations that genuinely focus on understanding each person's natural talents tend to achieve corporate success. We need to create different routes for people to progress and develop; otherwise we will only appeal to a narrow range of people. This approach requires an open mind, tackling questions like "How can we use this person's talents and energies?" "How can we organize our work differently?" or "Are we aiming for the wrong things?" But if such issues are genuinely addressed, great things can be achieved.

"Alignment" is another key element of a successful Talent Strategy. When selecting or developing people, most organizations focus on the skills, knowledge, experience and behaviors required for the role. However, some organizations are beginning to look at the behaviors required to operate effectively in a particular team or culture. We need to understand the relationship between people's motivations and the sorts of organizational cultures in which they will thrive.

Talent Management should be about delivering business success through understanding talent, and how it will achieve the specific goals of the organization. It is about ensuring that we understand what blockages can spoil all our hard work. It is about operating people processes that join together not only with each other, but with the business's goals. And finally, it is also about understanding how to manage people for alignment as well as ability. If we adopt these approaches, not only will business success follow, but we should also have fulfilled and effective people.

Talent Management: An Emerging Trend

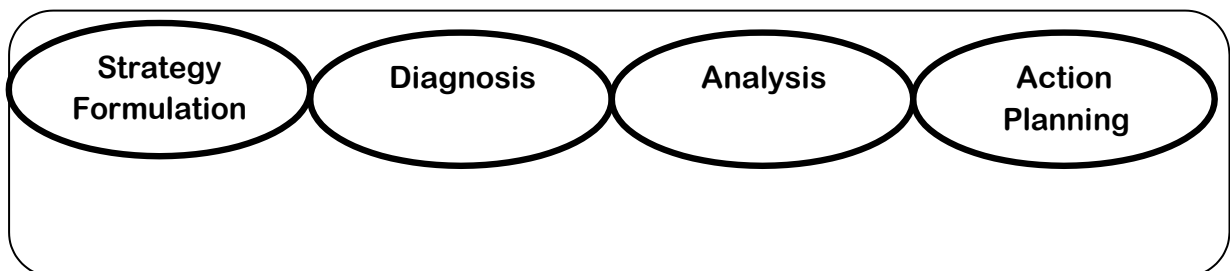
Research suggests that companies that excel at talent management ensure internal consistency and reinforcement of the practices they employ to attract, select, develop, evaluate and retain talent. To manage the most important assets more and more companies today are taking a holistic approach to talent management – from attracting and selecting wisely, to retaining and developing leaders, to helping employees transition out of the company.

Talent management is viewed as a strategic approach to managing human capital throughout the career cycle: planning, developing, retaining and acquiring your most important assets.

- **Planning**
- **Developing**
- **Retaining**
- **Acquiring**

Program for a Strategic Talent Management Planning

The following four stages in the creation of a strategic talent management program will help develop the five areas. They operate as a cascade down the organization, from senior management, to talent managers.



Developing Talent

Developing Talent, i.e. the Learning and Performance Improvement of high performers, is an essential part of Talent Management. Firms can protect their human capital from being eroded by making knowledge, skills and capabilities more unique and valuable by a so called –make system, which comprises of comprehensive training, promotion-from within, developmental performance appraisal process, and skill based pay. Although everyone cannot become organizational superstars they can push the limits of what they can accomplish. Therefore, organizations which embed development into their very core can attract more Talent, retain it longer and have better performance over the long run.

Talent Retention

The greatest challenge faced today by organizations the world over is retaining talented employees in the organization. A debate raging since many decades has been as to whether to retain them is more important than finding a successor to the vacant position. Whilst the argument continues, organizations should focus on the causes, consequences and control of employee turnover in an organization. By employee turnover, we mean that employees of an organization cease to remain in the services of that organization and leave for reasons best known to them.

Talent Acquisition

Companies realize that if they can attract and hire top talent, they will have a competitive advantage. In essence, companies are competing on the basis of their intellectual capital. Their ability to acquire top employees is critical due to the "war for talent," in which organizations are always looking to lure the "best and the brightest."

A simple way to help improve talent flow is to offer training on effective interviewing techniques. When managers are able to select more effectively, it lowers the probability of making a "bad hire." But talent flow is more than just reducing poor hiring decisions. It also involves being able to attract top candidates. These talented individuals tend to have several choices as to where they can work because they are in high demand. Knowing that they can no longer rely on - nor desire - lifetime employment, these talented individuals are seeking something else: lifetime employability.

Top candidates are seeking out jobs that will provide them with opportunities to learn and grow. By enhancing their skills, capabilities and education, these individuals know that they will be more marketable when they move on to their next employer. (Remember, the question today is not if an employee will leave, but when). These increased capabilities help ensure their employability throughout their career, thus giving them even more job choices. For today's talented candidate, lifetime employability is the mantra.

Thus, providing challenging job assignments and robust development programs that will help an employee grow professionally are critical for organizations to enhance their appeal. One of the top elements impacting candidates' decisions to join a firm is a company's ability to provide fast career growth and professional development. Companies with poor training and development opportunities are at a severe disadvantage in attracting star employees.

Talent Management: An Integrated Model

Talent management is a set of competency-based HRM practice aimed at getting the best out of its high-value people and ensuring that right people are in place to do a particular job. Smarter talent management leads to better financial performance of the company. The factors influencing Talent Management Strategy are to be dealt in such a way so as to fine tune it in accordance with the conditions that a firm is faced with. The macro-level variables are the environmental and the industry factors while the micro-level variables are the organizational factors.

A Talent Management process model has been developed, which outlines the sequence of steps to be followed in effectively implementing the talent management strategy. In

addition to these, ways of aligning the HR practices of the organization with the talent management initiatives have to be looked at. Thus it is seen that an Integrated Talent Management approach by the organization, with the talent management strategies and processes perfectly aligned with the various HR processes. The overall organizational strategy, would help in getting the best out of the talent and in achieving its objectives. The service and consulting areas of talent management emerged are: *Talent appreciation, Potential enhancement, Acquisition of talent, Knowledge management*. Grow Talent offers services in all the above areas. Grow Talent's offerings are based on the models discussed above and follow a unique methodology.

Talent appreciation (TAPM)

TAPM services are focused on assessing the way individuals learn, think, relate to others, and act. TAPM is used to evaluate the capacities, competencies and values of individuals for assessment of potential for career development and succession planning.

This is intricately linked to helping organizations map their capacity and competency requirements and then assessing talent to draw up individual development plans. The talent profiling thus done for organizations helps them identify critical competencies to be developed and capacities to be enhanced in order to meet future business requirements and achieve plans.

Potential enhancement (PETM)

The focus of PETM is to create learning experiences and solutions for individuals that will help convert their talent into competence. It also involves designing learning events and processes that enhance the potential of individuals.

Two intrinsic components of Grow Talent PETM are:

Capacity building modules - which focus on enhancing the four capacities of individuals

Competence building modules – which focus on specific areas like consulting skills, problem solving, and service quality, strategic selling, process designing, interviewing skills, etc.

Acquisition of talent (ACTM)

Grow Talent's approach to helping organizations acquire talent is based on:

Helping organizations define roles for specific leadership positions based on 'preferred futures' and strategy. Identifying the competencies required for each of these jobs. Determining the levels of fundamental capacities of learning, thinking, relating and acting needed to acquire these competencies. Defining the values which are needed to display the desired behaviors. Identifying individuals who would fit into these positions. Enable organizations and individuals to establish mutually acceptable contracts for employment and lay the foundation of win-win relationships

Knowledge Management

The domain of talent management includes culture-building and change management. Knowledge management services are aimed at leveraging knowledge for performance by creating an environment for sharing by building trust. The focus of knowledge management is to connect people and technology to capture and harness the tacit knowledge of the organization. By making trust the bandwidth of communication, knowledge management enhances sharing and thereby creates an appropriate environment for talent to translate into performance.

Opportunities for Improvement

Although organizations have made significant progress raising awareness and attention to talent management and implementing foundational programs, these efforts have not led to well-executed programs that are aligned with business priorities. Organizations still lag in their ability to integrate talent management programs and evaluate the return on their talent investments. The reasons are many, including: Human Capital is not sufficiently aligned with Business Strategy: Lack of Accountability and Capability for Talent Development: Inconsistent Execution and Integration of Talent Programs.

To overcome all these, organizations should incorporate certain following recommendations to create a sophisticated talent management environment:

- ✓ Must have meaningful descriptions of the capabilities (skills, behaviors, abilities and knowledge) required throughout the organization.
- ✓ Relate the skills and capabilities to a leadership role or a job position.
- ✓ Talent management processes must create a comprehensive profile track of their talent.
- ✓ Working culture should be improved and maintained to retain talent in long run.
- ✓ More certified training should be given to the employees to boost their effectiveness and efficiency, used as a tool of motivation.
- ✓ Organization should identify the crucial talent initiative and should know which talent management elements can have the greatest impact on the business and therefore provide a better basis for prioritization and implementation.

With the increasing competition for highly skilled talent, creating an open and innovative culture, aligned with what matters most to employees, will provide the organization with the competitive edge necessary to achieve organizational goals. The best practices critical to retaining talent include providing career development opportunities, leadership, trust-based relationships with managers, communication and feedback. If a climate characterized by an open culture is created, the groundwork set for an environment consistent with what most employees want would be the result. Articulate this employment brand in the form of an employee value proposition, that is, what employees in your organization get for what they give.

Conclusion

Global firms today are facing the most pressing challenges directly related to human capital management which are due to ever changing characteristics of the environment: enhanced globalization, evolving demographics, the need for more competencies and motivation. Global Talent Management is a relatively new approach towards managing the best possible human talent within an employment environment that is becoming increasingly competitive. Companies like Wal-Mart that have championed integrated processes like supply chain management and have demonstrated the dramatic impact that coordination and integration can have on company's success and profitability.

A successful talent management process starts with the foundation built by supply chain management, Six Sigma, CRM, and adapts it to HR. Unfortunately, its strength and integration are the primary roadblock within HR because getting HR people to coordinate their efforts is about as easy as herding cats. Highly demanding business environment

makes it imperative for the organizations to build competence in the form of superior intellectual capital. It is agreed by almost all CEOs of big companies that it is the human resource - a talented one - that can provide them competitiveness in the long run. So it is the duty of the HR department to nurture a brigade of talented workforce, which can win them the war in the business field.

As organizations continue to pursue high performance and improved results through TM practices, they are taking a holistic approach to talent management—from attracting and selecting wisely, to retaining and developing leaders, to placing employees in positions of greatest impact. The mandate is clear: for organizations to succeed in today's rapidly changing and increasingly competitive marketplace, intense focus must be applied to aligning human capital with corporate strategy and objectives. It starts with recruiting and retaining talented people and continues by sustaining the knowledge and competencies across the entire workforce. Talent management practices can have a crucial impact on society as well. Meeting this organizational supply and demand requires the right –Talent DNA and supporting technology solutions. By implementing an effective talent management strategy, processes, and analytics, organizations can help ensure that the right people are in the right place at the right time, as well as organizational readiness for the future. Indeed, talent has to be spotted, carefully nurtured and most importantly preserved in case the companies desire to augment organizational performance.

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Role of HRIS in Improving Modern HR Operations

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Abstract

The role of HR is becoming pivotal in the 21st century. As organizations face stiff market and other external pulls and pushes, the HR becomes vital source for managing future challenges. A strategic HRIS provides important information about human resources needs and capabilities; this information assists the management team in establishing the organizational mission and setting goals and objectives in motion. Considering this framework, this paper aims to study the use of HRIS in improving HR operations. Particularly, it focuses on the need of HRIS in the performance of HRM functions at the lowest possible cost and also at a fast rate, which pose increased challenges for HR professionals. Organizations have started to automate these functions by introducing HRIS technology.

Keywords: Strategic HR Planning, Information Systems, HRIS Applications

Information Systems for Human Resources Management

Information is an essential tool for managers in the retention, recruitment, utilization and evaluation of human resources in organizations. Since they support the goals and objectives of the organization, information systems play an important role in planning and management of human resources. These systems will serve as an important personnel administration operational programs, including employee record keeping, budget control, compensation, benefits management, and government reporting. *A human resources information system (HRIS) is the integration of software, hardware, support functions and system policies and procedures into an automated process designed to support the strategic and operational activities of the human resources department and managers throughout the organization.*

An HRIS database maintains an inventory of people, job skills, and positions and its system draws on these inventories for transaction processing, reporting, and tracking. The HRIS provides a foundation for a set of analytical tools that assist managers in establishing objectives and in evaluation the performance of the organization's human resources programs. The well designed HRIS will serve as the main management tool for aligning human resources department goal with long term planning goals.

Development of HRIS

HRISs are systems used to collect, record, and store, analyze, and retrieve data concerning an organization's human resources. The collection of information on aspects of work life

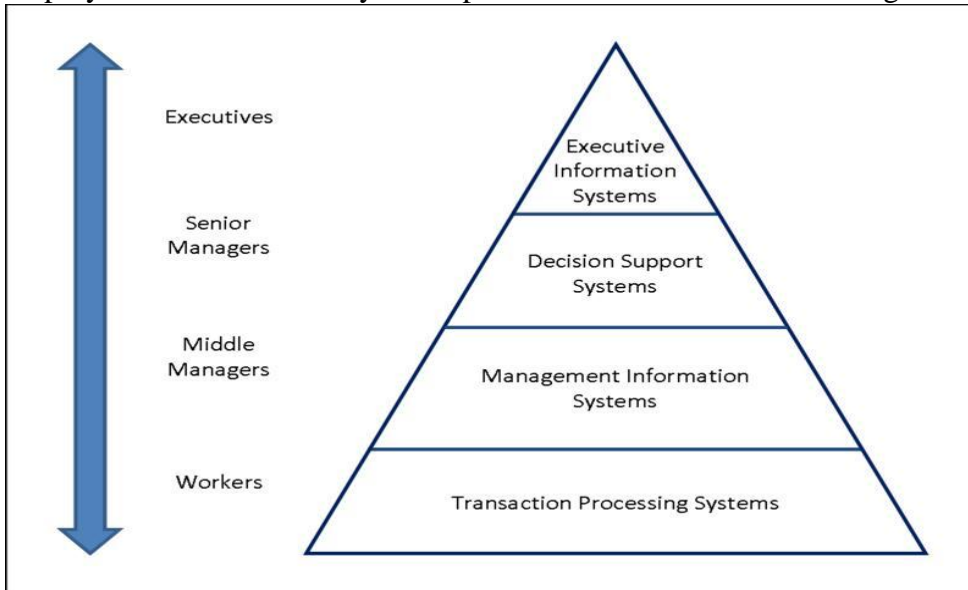
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as diverse as salary and payroll, compensation, leave, accidents, superannuating and employee benefits has always been part of the human resource manager's function.



In the early development of human resource management, information systems, although often accurate and comprehensive, were mainly used for administrative and operational purposes. Forms were used to collect leave requests, workers compensation and accident data, and salary variation and superannuation entitlements. During the 1970s and 1980s, several factors radically changed attitudes towards human resource information systems. The increasing complexity of payroll systems in this period demanded more flexibility in, and access to information system. In large organizations, centralized payroll processing sections began to be separated from other human resource functions. Some organizations contracted their payroll responsibilities to external payroll bureaus with greater technological expertise, and for reduced costs.

Nature and Benefits of HRIS

Modern human resource information systems are comprehensive, accurate and accessible systems for recording employee and work data relevant to HRM, HR and organizational planning. HRIS is the system used to acquire, store, manipulate, analyze, retrieve and distribute pertinent information regarding an organization's human resources. Its purpose is to facilitate, or support, straight, tactical and operational decision making, to avoid litigation, to evaluate programs, policies, or practice and daily operations. Specific benefits of such systems include:

i. Improved planning and program development using decision support software. Faster information processing and improved response times
ii. Decreased administrative and HR costs
iii. Accuracy of information
iv. Enhanced Communication at all levels. Not all systems fulfill all these requirements, nor is such a complete system suitable for all organizations. Essentially however all HRIS contain information on:

- Employees
- Jobs and work conditions
- Positions

- HR events (e.g. recruitment, training and development, performance appraisals, and terminations).

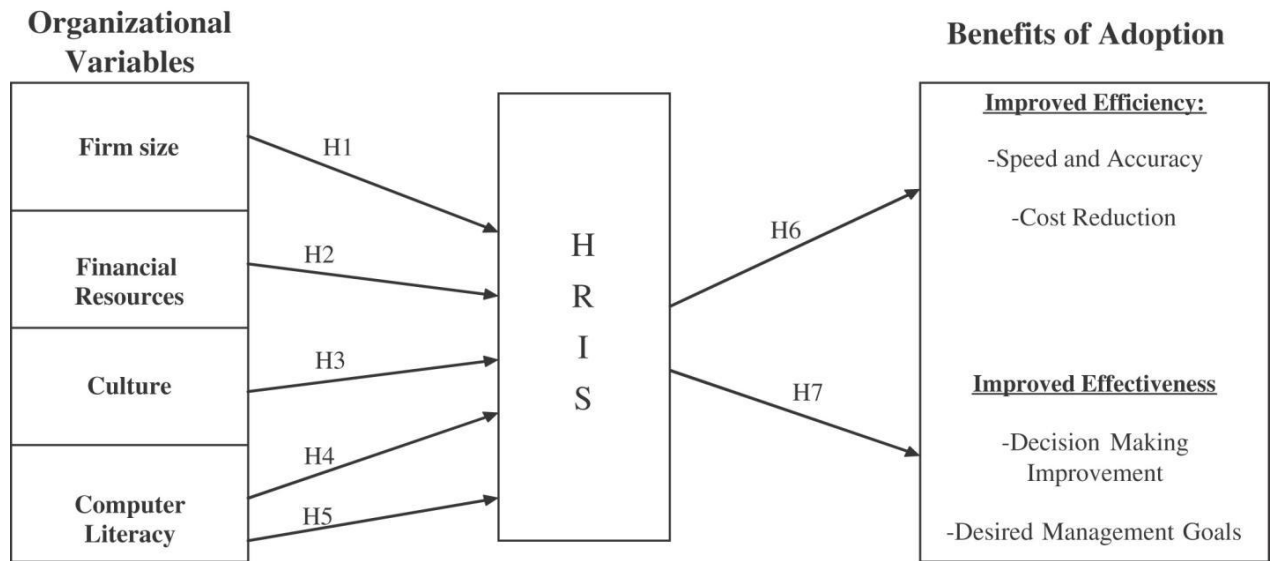
Comprehensive and integrated HRIS can be used widely -in administrative, operational and strategic fields by HR and other managers. On the operational level HRIS data can be used to identify potential internal applicants for job vacancies, saving external recruitment costs and assuring employees of career opportunities. Strategically, such information may be used to gauge the effectiveness of current recruitment or promotional systems, their costs and/ or *benefits*, and enable subsequent changes of direction in line with proposed organizational strategies.

HRIS enables the human resource department to make a more active role in organizational planning. Computerization will make forecasting more timely, cost effective, and efficient. Integration and storage in a single database all of the human resources information. HRIS will accelerate the process of comparing costs and benefits of human resources activities.. An effective HRIS will facilitate the easy storage and retrieval of human resources records that are very vital for operations. Human resources information systems (HRIS) can play an important part in a company's HR function. After all, we live, work and play in the information age. Implementing an effective HRIS can be sure-fire for HR to stay on the cutting edge in its bid to deliver more effective and streamlined service.

HRIS can assist human resources in numerous ways, but particularly in their day-to-day duties by streamlining workflow processes through control processes, system interfaces and database validation. One of the most common HR gripes is being bombarded with mundane e-mail and administrative work that takes away from the actual practice of *'walking the floor'*. For instance, a HRIS can automatically route e-mails to a generic mailbox that anyone in HR might open up and see what processing and transactions have been going on. For those e-mails that need approval it can use the information structure within the HR database to work out which person works in which division, who has approved it initially and who to forward that approval to the next person.

In this instance a database can also maintain all the rules, so if the e-mail is not acted on for several days, the HRIS then escalates the issue and goes to the next in charge or works out what it needs to do, which in turn reduces paper flow. When a new employee comes on board, for instance, the HRIS creates e-mails that need to be generated so that security knows about the new employee, switchboard is notified and the legal department is advised about if there are any compliance or registration issues.

With continued technological breakthroughs HRIS systems are becoming increasingly advanced. One of the most core HRIS functions is intranet HR self-service. Some larger companies use their intranet today for online appraisals, career management, sentiment surveys, training registrations and publishing people related company information, HRIS can also integrate with desktop applications including e-mail, word document merges and schedules via triggered actions within the HRIS, so that events and actions are monitored, documents generated, appointments booked and checked and emails prepared and sent (online analytical processing databases), real time systems, web GUI's and scanned data.



Types of Human Resource Information (*HRIS*)

Operational HRIS

Operational human resource information systems provide the manager with data to support routine and repetitive human resource decisions. Several operational-level information systems collect and report human resource data. These systems include information about the organization's positions and employees and about governmental regulations.

1. Employee Information Systems: The human resource department must maintain information on each of the organization's employees for a variety of decision and reporting purposes. An employee profile usually contains personal and organization-related information, such as name, address, sex, minority status, marital status, citizenship, years of service or seniority data, education and training, previous experience, employment history within the organization, salary rate, salary or wage grade, and retirement and health plan choices. The employee inventory may also contain data about employee preferences for geographical locations and work shifts. Another part of an employee information system is an employee skills inventory. The skills inventory contains information about every employee, such as work experience, work preferences, test scores, interests, and special skills or proficiencies.

2. Position Control Systems: A job is usually defined as a group of identical positions. A position, on the other hand, consists of tasks performed by one worker. The purpose of a position control system is to identify each position in the organization, the job title within which the position is classified, and the employee currently assigned to the position. Reference to the position control system allows a human resource manager to identify the details about unfilled positions.

3. Applicant Selection and Placement Information Systems: After jobs and the employee requirements for those jobs have been identified and after a suitable pool of job candidates has been recruited, the candidates must be screened, evaluated, selected, and placed in the positions that are open. The primary purpose of the applicant selection and placement information system is to assist human resource staff in these tasks.

4. Performance Management Information Systems: Performance Management Information Systems include performance appraisal data and productivity information data. Performance management information systems data is frequently used as evidence in employee grievance matters. Performance management information can lead to a number

of decisions beyond merely supporting the operational decision to retain, promote, transfer, or terminate a single employee.

5. Government Reporting and Compliance Information Systems: Government Reporting and Compliance Information Systems provide information needed both to maintain compliance with government regulations and to improve productivity and reduce costs associated with employees.

Tactical HRIS

Tactical information systems provide managers with support for decisions that emphasize the allocation of resources. Within the human resource management area, these decisions include recruitment decisions; job analysis and design decisions, training and development decisions, and employee compensation plan decisions.

1. Job Analysis and Design Information Systems: The information inputs to the job analysis and design information system include data from interviews with supervisors and workers and affirmative action guidelines. Inputs also include information from sources external to the firm, such as labor unions, competitors, and government from sources external to the firm, such as labor unions, competitors, and government agencies. The outputs of the job analysis information system are job descriptions and job specifications. These outputs provide managers with the basis for many tactical human resource decisions.

2. Recruiting Information Systems: To direct the recruiting function, the organization needs to develop a recruiting plan. The plan specifies the positions to be filled and the skills required of the employees for these positions. To develop the plan and to monitor its success, a recruiting information system is necessary to collect and process the many different types of information needed to construct the plan, including a list of unfilled positions; the duties and requirements of these positions; lists of planned employee retirements, transfers, or terminations; information about the skills and preferences of current employees; and summaries of employee appraisals.

3. Compensation and Benefits Information Systems: The Compensation and Benefits Information Systems may support a variety of tactical human resource decisions, especially when compensation and benefits information is related to information from internal and external sources. Compensation and benefit plans can play an important part in improving an organization's productivity. Tying employee productivity to pay or encouraging increased productivity with incentive pay plans can often improve an organization's productivity substantially.

4. Employee Training and Development Systems: The training offered by the employee training and development systems must meet the needs of jobs available in the organization as identified through the position control system and the job analysis and design system. The training should also be directed at those persons interested and capable of benefiting from it, as identified by the skills inventory and human resource files.

Strategic HRIS

1. Information Systems Supporting Workforce Planning: Organization involved in long-term strategic planning, such as those planning to expand into new market areas, construct factories or offices in new locations, or add new products, will need information about the quantity and quality of the available workforce to achieve their goals. Information systems that support workforce planning serve this purpose.

2. Information Systems Supporting Labor Negotiations: Negotiating with craft, maintenance, office, and factory unions requires information gathered from many of the human resource information systems. The human resource team completing the negotiating needs to be able to obtain numerous ad hoc reports that analyze the organization's and union's positions within the framework of both the industry and the current economic situation. It is also important that the negotiating team be able to receive ad hoc reports on a very timely basis because additional questions and tactics will occur to the team while they are conducting labor negotiations.

3. Specialized Human Resource Information Systems Software: A great deal of software has been specifically designed for the human resource function. This software is available for all types and sizes of computers, including microcomputers. Software specifically designed for the human resource management function can be divided into two basic categories: comprehensive human resource information systems software and limited-function packages that support one or a few human resource activities. These software packages can be used in computer-based training programs designed by human resource department for training specific employees in-group and independent study programs.

Comprehensive HRIS

In the last few years, the software industry has produced several products that organize the various human resource information systems into integrated software referred to as human resource information systems, or HRIS, software. In general, the computerization of HRIS has resulted in an integrated database of human resource files. Position files, employee files, skills inventory files, job analysis and design files, affirmative action files, occupational health and safety files, and many other human resource files are constructed in a coordinated manner using database management systems software so that application programs can produce reports from any or all of the files. Thus, the human resource management director can produce reports listing likely internal candidates for open positions by running an application program that queries position files, job requirements files, and skills inventory files.

Limited-Function HRIS

Numerous commercial software packages are sold for use on mainframes, minicomputers, and microcomputers that are designed to handle one or a small number of human resource functions. Microcomputer versions of these single-function software packages are relatively inexpensive and easy to operate and allow the human resource manager to automate a function quickly and easily.

1. Training Software

Many training software packages are available for all types and sizes of computers to provide on-line training for employees. They include

- Management training software
- Sales training software
- Microcomputer training software
- Word processing training software

These software packages can be used in computer-based training programs designed by human resource department for training specific employees in-group and independent study programs. Computer-based training aids often simplify the trainer's job and allow

the trainer to individualize instruction more easily than in traditional, group-based training classes.

Information System (IS) Applications in Human Resource Management (HRM)

The system of applications of Information Technology (IT) in HRM is referred to as Human Resource Module. HRIS merges some of HRM functions with the IT field, wherein the planning and programming of data processing systems have evolved into standardized routines and packages of Enterprise Resource Planning (ERP) software. ERP integrates the human resource module with finance, production, and sales and administration modules.

Generally, traditional HRM functions are common to all organizations. They consist of tracking data regarding personal histories, family details, skills, capabilities, experiences, pay, benefits and grievances. Performance of these functions are increasingly complex, must be performed at the lowest possible cost and also at a fast rate, which pose increased challenges for HR professionals. Organizations have started to automate these functions by introducing HRIS technology.

Development of client -server HRIS enables HR executives to assume responsibility and ownership of their systems compared to client-server architecture, which came largely in the form of mainframe computers and necessitated heavy capital investment to purchase program proprietary software. HRIS is developed around six main areas of human resource management viz., e-recruitment/applicant tracking, e-training, e- payroll, e-benefits, e-self service and e-time and labour management.

HRIS is developed around six main areas of human resource management viz., e-recruitment/applicant tracking, e-training, e- payroll, e-benefits, e-self service and e-time and labour management.

1. E-recruitment / Applicant Tracking: E-recruitment manages job descriptions and job vacancies, search for candidates and the interview process. E-recruitment maintains profiles, searches for and refers jobs to colleagues and follows the recruitment process. E-recruitment/applicant tracking system reduce administrative tasks, cost and time required to perform recruitment activities. It is also referred to as an applicant-tracking system; this is a web-based application that enables the electronic handling of organizational employment needs.

These activities include posting job advertisement on web sites to stimulate and attract candidates, known as job boards. Job boards allow candidates to apply on-line and the candidates' data are stored on a database that allows searching, screening and filtering of applications. The application tracking system shortlists the candidates and arranges for interview and recruitment-related activities.

A company must organize itself internally before starting any applicant tracking systems evaluation process. When preparing to evaluate an applicant tracking system, it is essential to form a collaboration of stakeholders and give these decision makers time to arrive at an informed decision.

2. E-training: E-training provides a complete, scalable and open infrastructure that allows organizations to manage, deliver, and track employee training participation in on-line or classroom-based environments. Trainees interact with content and/or trainers at their own pace. Managers set the business flow from order processing to delivery and performance management to training output automatically. E-training systems deploy content to global learners; make use of mixed media and multiple discrete sites on a single instance of the application, define competencies attained by trainees, and update the trainees' competency profiles. It aims to ensure that HRM provides the right resources, competent and experienced trainers, and consolidate training initiatives on a scalable and cost effective basis. In addition, it aims to measure training effectiveness. E-training, provides learning opportunities not only to employees, but to customer and all other stakeholders by providing one-stop administration & automated data.

3. E-payroll: E-payroll models automatically collect data regarding employee attendance and work record for the purpose of evaluating work performance, they calculate various deductions including tax, and generate periodic pay cheques and tax reports. By preparing paperless online pay slips, the system is able to reduce administrative costs and time for the total operations. Employees too can view their exclusive data and get personalized reports. Payroll systems can define standard rules for automatically assigning and changing employee salary by using simple formulae. They are able to control processing rules and calculations using fast formula and use logic for complex cases. They can manage global compensation with one application by implementing a core payroll engine and installing local extensions to add the necessary functionality, reporting and process for individual countries. E-payroll is able to process from data, simultaneously, fully reconciled results and multiple employee groups.

4. E-benefits: E-benefits administration models enable HR professionals to track and administer diverse and complex benefit plans, employee benefit programs which may involve transpiration medical and health care, insurance, pension, profit-sharing, and stock option benefits. Such modules, through internet-based automation, can enable HR to improve benefits support and analysis whilst reducing time and costs involved in the administration, while increasing the consistency decisions on compliance issues at various levels across the organization.

5. E-self service human resource: E-self service HR modules collect process and manage all other kinds of data and information. or example, employees' demography profiles and addresses recruitment, selection training, development, promotions, capabilities, skill mapping and compensation planning. Such a module would allow individual employees to update and use employee-specific information, personalized to an individual's role, experience, work content, language and information needs. This module helps employees in managing everything from profiles including skills, resumes, contact details, self-appraisal data, bank data, learning, benefits and payroll. It empowers managers to operate transfers, employee training enrollment, performance appraisals, competency mapping, career planning and development and terminations. Thus, individual employee and managers are empowered to update information in order to streamline business processes, reduce costs and errors, increase speed, and enhance service.

6. E-time and labour: E-time and labour automates entire time and attendance records keeping process and operations through an automatically generated virtual time card. The time and labour management module, by interacting with information technology, collects and evaluates time and work information. It supports policies for holidays, over-time, and rounding. It improves reporting, extracting, and processing with a single database of employee time-related information. It provides an intuitive, web-based interface. The time and labour management module, by interacting with information technology, collects and evaluates time and work information. This module provides broad flexibility in data collection methods, human resource distribution capabilities and data analysis, and helps in establishing organizational cost accounting capabilities. This module allows entering time via web browser, mobile device and time card. It defines rotation plans based on shifts and work plans and employee mobility among departments or units. It supports policies for holidays, over-time, and rounding. It improves reporting, extracting, and processing with a single database of employee time-related information. This module is integrated automatically with other modules of human resource management like payroll and benefits.

Strategic HR Planning & HRIS

Proactive HR managers ensure that their HRIS contributes to organizational performance. A recent development in the uses of HRIS in many has been the linking of ‘benchmarking’ practices to the design, choice and implementation of such systems as a directly strategic initiative. Integration with organizational strategic objectives is achieved by the subsequent establishment of performance targets and quantitative measures. As a strategic ‘tool’, HRIS can be used to contribute to the development and modification of HR plans, on both quantitative and qualitative bases, and to feed into specific HRM functions.

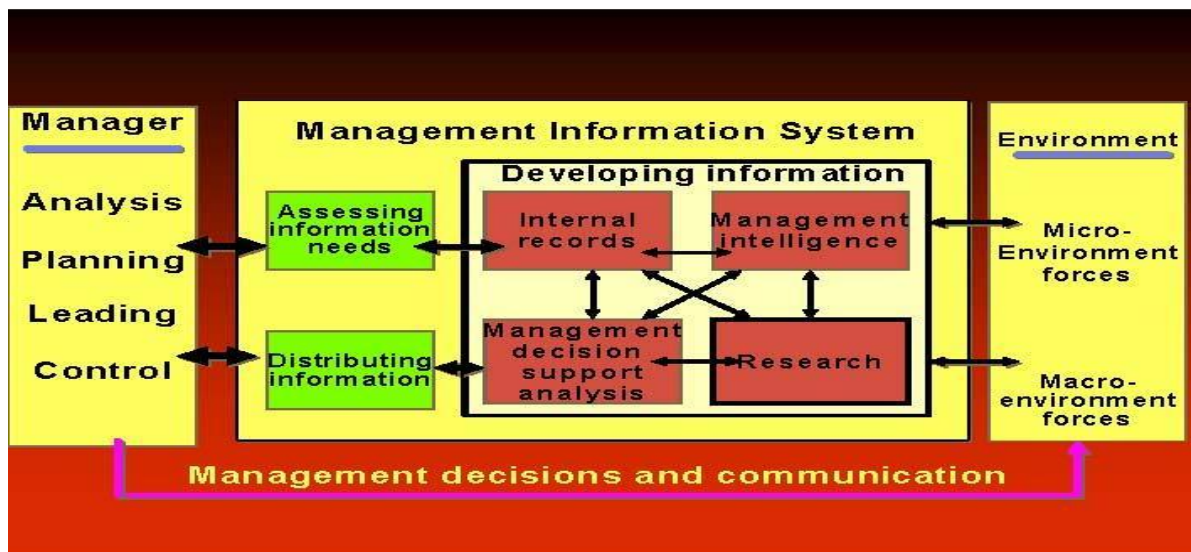
Relationship of HRIS with Overall MIS

Information is the backbone of healthy and efficient business management. An information system allows the collection and processing of data to produce useful information for designated users at each level of management. Information management must conform to well-defined principles, run on appropriate software, and be completely adapted to your organization within an integrated system usually known as Management Information System (MIS). Management Information System is the entire set of systems and activities required to manage, process, and use information as a resource in the organization. HRIS is the part of MIS that provides the information regarding workforce in the organization and facilitates the decision makers in decision making process in this regard.

Strategic HR Planning and HR Information Systems

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both compare organizational HR 'bottom line' outcomes by HRM function, between functions and with national or international performance benchmark



Purposes of HRIS

All organizations and their HR managers need to consider whether their HRIS will be primarily used for collecting, analyzing, interpreting or reporting employee information. The nature of the system chosen should reflect this primary purpose, based upon a realistic analysis of needs prior to its introduction. Small organizations with stable workforces and secure markets do not require complicated data analysis, but can benefit from comprehensive and accurate databases for reporting purposes. On the other hand, large organizations in competitive and dynamic industries demand strategic HRIS. Every organization needs to assess its particular needs and identify the most appropriate information system for its chosen purposes.

Common HRIS Functions

Mainly following functions are performed by the HRIS in different organizations.

- Job analysis information can be placed in the HRIS.
- The program can write job descriptions and job specifications.
- Constant monitoring of compliance with EEO legislation.
- Maintain records of rejected applicants.
- Saves money and time in compiling reports.
- Ensure that women and minorities or not be adversely affected.
- Track minority hiring, recruitment, and advancement.
- Forecast supply and demand of labor from both the internal and external labor markets.
- Useful for internal recruiting.
- Can post job opening for employees to access.
- Can search for match between job specifications and applicant qualification.
- Applicant tracking system.
- Administering and scoring ability tests.
- Scanning resumes submitted online (web based or e-mail) or in person (or mail).

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- Structured interviews.
- Matching qualifications with open positions (finding a good fit).
- Also, consider budgetary concerns.
- Help with registration, tracking training, monitor training costs, and schedule training.
- Used to deliver training.
- Career and managerial succession planning.
- Used to provide assessment tests to help employee's plan their own career.
- Predict career paths.
- Provide PA instruments and results.
- Comparisons between employees, groups, or supervisors ratings.
- Monitor attendance.
- Monitor compliance with Labor Standards.
- Individual sale data can be accessed (tracking commissions).
- Benefits can be managed and administered by computers.
- Planned raises and wage histories.
- Provides reports for Occupational Safety and Health Administration (OSHA).
- Track hazardous materials.
- Track accidents and costs of accidents.
- Record employee safety training.
- Record employee exposure to various conditions and chemicals.
- Track disciplinary actions and grievances.

HRIS Vendors

Many firms today offer HRIS packages. At the Web site for the International Association for Human Resource Information Management (mentioned Earlier) for instance Automatic Data Processing Inc. Business Information Technology, Inc., Human Resource Microsystems, Lawson Software, Oracle Corporation, PeopleSoft Inc., Restrac Web Hire, SAP America Inc., and about 25 other firms are listed as HRIS vendors.

HRIS Security & Privacy

The HR department must develop policies and guidelines to protect the integrity and security of the HRIS so that private employee information does not fall into the wrong hands. To maintain the security and privacy of HRIS records, companies should control access, develop policies and guidelines that govern the utilization of information, and allow employees to check their records.

A combination of written policy and effective use of your system's security features is needed to manage issues of data integrity and privacy. Because employee records are increasingly maintained in computer files, the traditional recordkeeping policies and practices need to be reviewed and updated in light of these technological times. Often more complete than paper records, computer records are full of information that needs to be protected from inaccurate actions as well as from unwarranted use. Three areas, in particular, need to be re-examined: employee right to privacy, management information and legal restrictions.

1. Employee right to privacy. An electronic system makes it easier to produce lists, combine data and share information. These very qualifies can contribute to a breach of privacy. What constitutes confidential information should be defined in a company

privacy policy. For example, some employees may prefer that their personal addresses and telephone numbers not be published on a list. Medical information, for instance, should always be carefully protected.

2. Management information. Businesses generally want to be close-mouthed about their affairs because of competition and actions management is considering. A primary goal of automation is the ability to produce better management information, but safeguards should exist to protect both the data and ability to produce reports.

3. Legal restrictions. The type of data that is considered confidential varies from state to state; the HR department should have a current list of the state requirements for employee record-keeping. Safeguards for data entry and use of the information can be handled by written policy and security.

Limitations of HRIS Implementation

Implementation a sophisticated information system is often more of a challenge than client expects, and several potential pitfalls account for this. Cost is one problem: for example, a representative from –All state Insurance Companyll reported that the costs of moving to a new HRIS had increased 10% per year for five year and that additional investment would be required to make the transition. Other systems run into management resistance. Inadequate documentation or training can undermine the system's utility and increase resistance to the system by exactly those employees and managers who are supposed to aid in its use. Installing the HRIS therefore needs to be viewed as a whole but also as a process composed of separate projects, each of which must be planned and realistically scheduled. Given these sorts of hurdles a careful needs assessment obviously should be done prior to adopting an HRIS. Particularly for firms with less than 150 employees, consideration should be given to depending more of individual software packages for managing separate tasks such as attendance, benefits and payroll.

Conclusion

The main conclusion of this paper is the realization that the use of Human Resource Information Systems seems to play an important role in Human Resource Management (HRM) because HRIS functions improve HRM in terms of administrative purposes and analytical purposes. As a key component of an organization wide integrated information system, a strategic HRIS will provide important information about human resources needs and capabilities; this information will assist the management team in establishing the organizational mission and setting goals and objectives in motion. Finally, I would like to express my own impression on this topic. It is my belief that HRIS add competitive value to the organization as a whole and to the HRM department specifically.

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Critical Issues in Downsizing in India

Umesh Maiya*

Abstract

The Indian corporate sector was fabulously liberal in increasing the size of the workforce, especially in the public sector, during the pre-liberalization period. The Indian government's policies pertaining to strengthening the public sector, employment generation, pampering trade unions, and reckless recruitment based on political expediency resulted in overstaffing and consequent human resource problems. With the dawn of Liberalization, Privatization, and Globalization (LPG) in 1991, the Indian corporate sector was forced to compete in the global market by focusing more on productivity, profitability, service excellence, quality, innovation, and cost containment. During the 1990s, many Indian organizations resorted to cost-cutting exercises through downsizing the workforce, and considered the organizational restructuring as a powerful and inevitable tool of earning and sustaining competitive advantage. This article focuses on the key drivers; benefits and costs of downsizing from the points of view of the organization, employees, and the society-at-large; Ethical issues in downsizing, how to downsize without tears, and finally, raises certain questions to be empirically examined and answered by future researchers in the field.

Keywords: Reengineering, Lean Management, Golden Hand Shake, Voluntary Retirement Scheme, Golden Gate, Rightsizing, Downsizing

Introduction

The Indian corporate sector was fabulously liberal in increasing the size of the workforce, especially in the public sector, during the pre-liberalization period. The Indian government's policies pertaining to strengthening the public sector, employment generation, pampering trade unions, and reckless recruitment based on political expediency resulted in overstaffing and consequent human resource problems. With the dawn of Liberalization, Privatization, and Globalization (LPG) in 1991, the Indian corporate sector was forced to compete in the global market by focusing more on productivity, profitability, service excellence, quality, innovation, and cost containment. During the 1990s, many Indian organizations resorted to cost-cutting exercises through downsizing the workforce, and considered the organizational restructuring as a powerful and inevitable tool of earning and sustaining competitive advantage. Organizations are governed by nine key elements: people, structure, task, technology, culture, strategy, processes, systems and environment (internal and external).

As a compulsion, organization has to invariably focus on –clean, lean and green organizationl in order to meaningfully survive, grow and excel in the long run. It is

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acknowledged all over the world that the 'effectiveness' of an organization largely depends on its 'people'. They can keep the place (reputation) and set the pace of the progress of any organization. In this sense, human resource can act like a 'double-edged sword': if managed properly, they can bring prosperity; if mismanaged, they can undoubtedly cause havoc. Furthermore, human resource of an organization will be considered as a common denominator to govern the behaviour of the task performance (e.g., service excellence in a bank), organizational structural synergy (e.g., efficiency-driven, people-friendly, goal-oriented workflow, communication flow, information flow and human resource flow), performance-driven Information and Communication Technology (ICT), long-term business-related corporate strategies, supportive organizational culture (openness, confrontation, trust, authenticity, pro-action, autonomy, collaboration, and experimentation), fool-proof systemic arrangement to achieve synergistic and symbolic integration of organizational processes and objectives, highly fine-tuned and simple organizational processes, and finally agility and dynamism to cope with the internal and external environmental influences. In the fitness of things, organizational downsizing poses both opportunities and potential threats to the organization. This article focuses on the key drivers; benefits and costs of downsizing from the points of view of the organization, employees, and the society-at-large; how to downsize without tears, and finally, raises certain questions to be empirically examined and answered by future researchers in the field.

Organizational Restructuring and Downsizing

As a result of Liberalization, Privatization, and Globalization, open competition erupted and posed a grave threat to the traditional business houses. Many efficient business houses collapsed, many financial engineering activities came into being for the survival of business. Corporate restructuring is one such area which has emerged recently. Organizational restructuring is an umbrella term that includes mergers, consolidations, divestitures, liquidations and various types of battles for corporate restructuring and used to mean almost any desirable change in operations, capital structure and ownership that is not part of the firm's ordinary course of business.

Objectives

- To know the driving forces of downsizing
- To identify the downsizing strategies
- To know the reasons for organization downsizing
- To identify the merits, demerits and effects of downsizing

Methodology

This study was descriptive and analytical in nature. The study was mainly depended upon the secondary data to develop this article/paper. Some secondary sources of data such as books, periodicals, journals, internet, industrial directory and relevant company documents were consulted for the purpose of gathering background information supporting the study.

Conceptual Framework

Downsizing, restructuring, layoffs are all the decent terms for removing people from their established jobs. Downsizing is not a dismissal for individual incompetence, but rather a decision on the part of management to reduce the overall work force.

Retirement: Retirement may be considered as a generalized social pattern, institutionally sanctioned and occurring when people live long enough.

Voluntary retirement scheme (VRS): It is retrenchment without tears. The Government in November 1999 formally took up VRS in Banks. During 1960s-80s, Indian banks went in for massive recruitment at various cadres due to vast expansion in retail banking and branch expansion. Employers refer to VRS as ‘golden handshake’, trade unions call it ‘voluntary retrenchment scheme’, and for the government it is ‘unstated exit policy’ which means that an exit policy which may not exist on paper (Suri & Poonam, 2003).

Rightsizing: Rightsizing is defined as ‘a scientific process of assessment of quantum of workforce to be downsized’ or ‘the degree of reasonableness in the process of downsizing to attain more net present value than the expected’.

Layoffs: in a layoff, a worker is asked to temporarily leave during periods of weak demand, but will be called back when business picks up. In downsizing, the separation between a worker and a firm is permanent.

Downsizing and Rightsizing

- Downsizing could be defined as ‘a reduction in the workforce or manpower within a company’.
- Downsizing refers to ‘intended reduction of workforce in order to achieve expected levels of productivity with a view to attaining expected levels of net present value’.
- Rightsizing is defined as ‘a scientific process of assessment of quantum of workforce to be downsized’.
- Rightsizing refers to ‘the degree of reasonableness in the process of downsizing to attain more net present value than the expected’.
- Both downsizing and rightsizing are done for wealth maximization.
- Downsizing is ‘a competitive organizational strategy where human resources, the most significant expenditure for an organization are reduced’ (McCune, Beatty, and Montagno, 1988).
- A workable definition of downsizing is that ‘it is a purposeful reduction in the size of an organization’s workforce to improve efficiency, productivity, and competitiveness’ (Cameron, Freeman, and Mishra, 1991; Cameron, 1995).
- The term ‘downsizing’ is often used to mean ‘intended reductions of personnel’ (McKinley, Sanchez and Schick, 1995:32).

So, intense change processes have often been conducted under the banners of –Reengineering, –Lean Management, –Golden Hand Shake, Voluntary Retirement Scheme, Golden Gate, –Rightsizing, and –Downsizing.

Downsizing Strategies

The downsizing process has occurred in all sectors of society from the private to the public sector affecting the size of the organization, workforce costs, and work processes. Four attributes define downsizing- intent, personnel, efficiency, and processes. Intent refers to a purposeful set of activities involving the decrease of personnel using many strategies,

with the intent of improving efficiency and decreasing waste, by focusing on the organization as the unit of analysis restructuring, redesigning or eliminating work processes (Cameron, 1994; 1995). Three primary strategies are used by organizations to downsize viz. Workforce reduction, Organizational redesign, Systemic Strategies.

1. **Workforce reduction:** In a workforce reduction, the focus is on eliminating people quickly by reducing the head count for a short-term payoff. In a workforce reduction people leave an organization based on a management decision, and downsizing or workforce reduction has become the most feared word in contemporary society (Wallulis, 1998). Downsizing, involving cost cutting through the elimination of underutilized resources to increase profitability through financial controls is based on economic model assumptions (Grant, Shani and Krishnan, 1994).
2. **Organizational redesign:** Organizational redesign strategies eliminate functions, divisions, and products focusing on work reduction rather than employee's reduction. Downsizing through organizational redesign focuses on eliminating work, not workers. Strategies used in redesign are aimed at eliminating functions, structural elements, and streamlining organizational processes (Cameron, 1995). Management goal in organizational redesign is to improve effective organizational performance in the areas of quality, production, efficiency, competitiveness, development and survival (Gibson, Ivancevich, and Donnelly, 1997).
3. **Systemic strategies:** When systemic strategies are used to downsize, the focus is on changing the organizational culture, the attitudes, and the values of employees too continuously improve the functioning of the organization systemic strategies require a reorientation to downsizing. The focus changes from efficiency to quality, which is achieved through a committed workforce. Downsizing strategies using a systemic approach focus: on the organizational culture and values; on the human resource system; on the customer; and on continuous improvement (Cameron, 1994; 1995).

Ethical issues in downsizing

- ✓ Those who have been downsized may never recover emotionally or financially. Studies have shown that employees who are retained also suffer: they have more health and emotional problems, and many lose motivation and loyalty. Workers who saw organization as a family feel lost without their familiar networks. There was more fraud among workers who survived downsizing and increased distrust of management.
- ✓ Another adverse consequence of downsizing is the loss of longtime workers who would have served as mentors for young and inexperienced workers.
- ✓ Downsized employees usually do not get new jobs at their old salaries, in fact, the older an employee is the longer he may have to wait to get any job at all
- ✓ Companies in fact replace older experienced employees who were working for less with younger inexperienced employees who have higher wages.

Managing Survivors and changing the organization

The literature reports that a frequent mistake is to overlook the effects on –survivors of the downsizing process, particularly of layoffs (Rubach, 1995). These employees have been found to experience fear of losing their job, guilt for still having it while former colleagues may be unemployed, anger at the organization that did this to them, and exhaustion from overload (Davenport, 1995; Smallwood & Jacobsen, 1987, Caplan & Teese, 1997).

Human Relations and Survivors' Morale

Downsizing practices that are strictly aimed at cost reduction may demonstrate less concern for the morale and welfare of individual employees than do other kinds of practices. Downsizing affects not only those terminated, but also the survivors of the downsizing process, whose continued efforts, remain vital to organizational success (Brockner, 1992). The degree of dignity and compassion afforded to terminate colleagues during the intrinsically demeaning downsizing process (Feldman & Leana, 1993; Sutton et al., 1986), for example affects survivors' expectations about how they will be treated in the future.

Perceptions of procedural fairness during downsizing have shown to affect survivors' post downsizing organizational citizenship behavior (Bies et al., 1993), job satisfaction (Davy et al., 1991), organizational commitment (Davy et al., 1991), and intentions to withdraw from the organization (Davy et al., 1991; Brockner, 1990) and from the job (Brockner, 1990). These effects can be especially pronounced for survivors who were highly committed to the organization before downsizing (Brockner et al., 1992). Downsizing may also lead to feelings of job insecurity among survivors. Such feeling may generate stress, which in turn may manifest itself in dissatisfaction, intent to leave the organization, greater absenteeism, and higher turnover (Borosso & Burgerss, 1992; Tombaugh & white, 1990). Demands for survivors to increase productivity, to make up for the efforts of dismissed workers (Russell, 1995), changes to new or redesigned jobs, or changes in organizational structure can further increase job-related stress for survivors. Some of the consequences of this stress are subtle but have potentially significant effects on organizational performance. For example, downsizing appears to bring about more frequent and lengthier disability claims from affected workers (Koco, 1996).

Organizational Downsizing: Key Drivers

There are several reasons for downsizing. The most common among them are to:

- Improve efficiency
- Respond to decline in sales and increase in cost
- Reduce overhead costs
- Protect long-term interests of the organization
- Achieve technological advancement that reduces the requirement for manpower
- Restructure the organization
- Effect globalization of the economy
- Shift from manufacturing to service industry
- Right size resources in relation to market demand
- Take advantage of cost synergies after a merger
- Release least productive resources

Quite a good number of companies have reaped the benefit of Voluntary Retirement Scheme (VRS). Tata Iron and Steel Company Limited (TISCO) is a classic example. SAIL, Public Sector Banks, KSB Pumps, MNCs like Wyeth Lederle and Rekitt and Colman, Castrol, ICI India, Mangalore Chem.and Fert.(MCF), Philips India, Whirlpool, Bajaj auto, Bombay Burma Trading, 26 Public Sector Banks, Albright and Wilson etc. are the other firms that have downsized the workforce.

Benefits of downsizing

Why do firms downsize?

- Reduce cost
- Reduce layers of management to increase decision making speed and get closer to the customer
- Sharpen focus on core competencies of the firm, and outsource peripheral activities
- Generate positive reactions from shareholders in order to improve valuation of stock price
- Increase productivity
- Offers the only route to retrench surplus employees
- Lucrative settlement prevents resentment
- Voluntary nature precludes the need for enforcement
- Allows specific divisions to be downsized
- Lowering of overall wage bills enables salaries to be raised

Demerits

- Best employees may accept the deal and leave
- Creates a sense of fear among those who stay
- Severance costs may outpace productivity gains
- Worker protests may disrupt operations
- Company earns a bad reputation in society

Benefits for downsized employees

- Relief of uncertainty
- Ex-gratia
- New jobs
- Increased family attachment
- Tax benefit
- Opportunity to hone other skills

Demerits

- Loss of brand
- Some employees may be driven to suicide
- Social unrest

Cost of downsizing – Direct

- Severance pay
- Accrued vacation/sick pay
- Supplemental unemployment benefits

- Outplacement
- Pension and benefit payouts
- Administrative processing costs
- Cost of rehiring former employees
- Training

Cost of downsizing – Indirect

- Recruiting and employment costs of new hires
- Low morale; risk-averse survivors
- Increase in unemployment tax
- Potential lawsuits
- Heightened insecurity
- Loss of institutional memory and trust

Downsizing Effects: Overall

- Mixed effects on firm performance
- Reputation
- Lifelong employment policies lose their credibility after a downsizing

Downsizing Effects: Employee Morale

- Employee motivation disrupted
- Violation of psychological contract
- –Survivors – feeling of insecurity among survivors, such feeling may generate stress, dissatisfaction, greater absenteeism, high turnover (Borson and Burgess, 1992)

Downsizing Effects: Workforce quality

- Loss of institutional memory
- Most marketable employees leaving
- Early retirements and voluntary reductions often result in too many people quitting

Downsizing Effects -?

Downsizing works best when:

- Changes in strategy, organization structure and culture accompany job cuts of downsizing
- Weak business units and plant closures are used as basis of reductions, rather than across the board cuts affecting all units (including healthy ones).

The successful downsizing necessitates:

- Evaluation of the overall impact of downsizing keeping in view the long run interests of all key stakeholders
- Developing a smooth downsizing process
- Strengthening the remaining firm by addressing survivors' needs for security and desire for fairness through a focused programme so that organization can achieve the following:
 1. Constructive identification of shared values, missions, and goals

2. Enhanced communications, reducing rumours and improving information flow
3. Reduced management and employee guilt, fear, and grieving
4. Redefined responsibilities and objective evaluation of skills
5. Validation of employee value and contribution
6. Improved employee responsibility for skill and career development

Conclusion

- For downsizing without tears, I strongly recommend Selective Retirement Scheme (SRS) instead of Voluntary Retirement Scheme (VRS). Therefore, the firm must identify all the low performers and trouble creators in the organization and they must be targeted for SRS.
- The success of downsizing significantly depends on how the scheme is implemented and the perception of the persons opting for VRS and the survivors.
- Factors contributing to the success of downsizing are effective communication, building trust among employees about procedural justice, and involvement of multiple stakeholders.
- Cutting the number of employees only cuts the wage bill but it does little to cut waste, inefficiency and idle time, which account for far greater costs.
- Negative reactions are caused by downsizing-violations of two fundamental human motivating forces: 1. The need for security – downsizing eliminates and employee's sense of security 2. The desire for fairness – survivors identify with downsizing victims and as a result, may distance themselves from the organization, feeling that loyalty deserves job security.

Thus, anxiety and job insecurity stifles innovations, brings down morale, decreases productivity and quality, undermines loyalty, and increases distrust of management. Every top management should follow the maxim that –If you wish to plan for a year sow seeds, if you wish to plan for ten years plant trees, if you wish to plan for a life time develop people.¶

Future Research Questions

- Does downsizing always improve the bottom line performance of an organization?
- How to take good care of the –survivors¶ after downsizing?
- What factors do really determine the efficiency and Effectiveness of a downsizing programme in an organization
- What lessons can one learn from the most innovative Downsizing Programmes of some progressive organizations?

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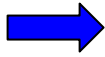
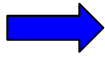

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Table 1: Downsizing and its many associated terms

Building down	Downshifting	Redundancies
Bright sizing	Dumb sizing	Re-engineering
Capsizing	Elimination of employment security	Release of resources
Career change opportunity	Functionalizing	Renewing
Change management	Human resource re-engineering	Reorganizing
Compressing	Involuntary separation from payroll	Reshaping
Consolidating	Leaning up	Resizing
Contracting	Ratcheting-down	Restructuring
Corporate Alzheimer's	Rationalizing	Retooling
Corporation amputation	Reallocating	Retrenching
Corporate anorexia	Reassigning	Revitalizing
Declining	Rebalancing	Rightsizing
De-hiring	Rebuilding	Slimming down
Delaying	Redeploying	Slivering
Demassing	Redesigning	Streamlining
Derecruiting	Redirecting	Suisizing
Dismantling	Reduction-in-force	Trimming

Figure 1: Antecedents and driving forces of downsizing

Macro-economic 	<ul style="list-style-type: none">▪ International Competition▪ Globalization▪ Political Trade Agreements
Industry-specific 	<ul style="list-style-type: none">▪ Decline in total industry sales▪ Decline in profits▪ Introduction to new technology▪ Rising labour costs▪ Need for greater responsiveness to customer needs▪ Deregulation▪ Privatization
Company-specific 	<ul style="list-style-type: none">▪ Poor financial results▪ Change in strategy▪ Change in management▪ Change in ownership▪ Improvement of innovation▪ Improvement of entrepreneurship▪ Poor productivity relative to competition

Case Study on Employee Engagement and Performance Appraisal: ITC Maurya

Priyanka Anand*

Abstract

The hotel industry in India has experienced considerable and consistent growth over the last decade. The influx of tourists for the common wealth games has caused a further rise in the five star and deluxe hotels. In sync with the emerging trend, the study focuses on the two important HR practices of performance appraisal and employee engagement in the hotel industry. The research was conducted in ITC Maurya evaluates their practices relating to HR processes. The basic methods and systems are described keeping in mind the general trend in the Industry. ITC Maurya conducts the Q12 Gallup survey on its employees, this method is used to access the existing levels of satisfaction amongst employees. The employees were involved and highly satisfied with the work environment. The performance appraisal standards are updated and different methods of appraisal are used across the organization. The employees were aware of the criteria for appraisals and also related a sense of importance to them. The incentives and initiatives taken by the Hotel for various levels in the organization were communicated to all the employees.

Keywords: Employee Engagement, Performance Appraisal, Hospitality Sector

Introduction

The growing trends and rising competition in each category of hotels from five star deluxe to five star and even the new age budget hotels has caused the best in the business to evaluate their practices and check for areas of improvement. As the economy is developing and becoming more fluid the sustenance and growth of all organizations have assumed new dimensions all together.

Company Background

ITC is one of India's best private sector companies with a market capitalization of nearly US \$ 18 billion and a turnover of over US \$ 4.75 billion. ITC is rated among the World's Best Big Companies, Asia's 'Fob 50' and the World's Most Reputable Companies by Forbes magazine, among India's Most Respected Companies by Business World and among India's Most Valuable Companies by Business Today. ITC also ranks among India's top 10 'Most Valuable (Company) Brands', in a study conducted by Brand Finance and published by the Economic Times. ITC has a diversified presence in Cigarettes, Hotels, Paperboards & Specialty Papers, Packaging, Agricultural-Business, Packaged Foods & Confectionery, Information Technology, Branded Apparel, Personal Care, Stationery, Safety Matches and other FMCG products. ITC is an outstanding market leader in its traditional businesses of Cigarettes, Hotels, Paperboards, Packaging and Agri-Exports. Over the last decade and half the mad rush to India for business opportunities has

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intensified and elevated room rates and occupancy levels in India. Gaining market share even in its nascent businesses of Packaged Foods & Confectionery, Branded Apparel, Personal Care and Stationery. ITC's Agricultural-Business is India's second largest exporter of agricultural products. ITC is one of the India's biggest foreign exchange earners (US \$ 2 billion in the last decade). The Company's 'e-Choupal' initiative is enabling Indian agriculture significantly enhance its competitiveness by empowering Indian farmers through the power of the Internet. As one of India's most valuable and respected corporations, ITC is widely perceived to be dedicatedly nation-oriented. Chairman Y C Deshpande calls this source of inspiration "a commitment beyond the market". In his own words: "ITC believes that its aspiration to create enduring value for the nation provides the motive force to sustain growing shareholder value. It was the first to launch the powerful idea of a 'Hotel within a Hotel' by segmenting and branding the hotel services. It created the exclusive 'ITC One', 'The Towers' and the 'Executive Club' each catering to the needs of the global business traveler with unmatched quality and a range of services.

Employee Engagement at ITC Maurya

Employee engagement is the measure of how involved and committed the workers are towards their organisation and values. A well engaged employee is well aware of the day to day happenings of the organisation and work with his or her fellow colleagues to improve the performance of the individual and work towards the betterment of the organisation. It is an optimistic attitude that the employees hold towards their organisation. Employee engagement is how the employee feels about his workplace employee feels about his workplace and whether he or she is satisfied with the work or not. It is also concerned with the emotions of an individual employee. The unique emotional balance of employees and their experience. The employers and their talent of creating conditions that give rise to employee engagement. Communication among employees at all levels in the organisation.

Levels of engagement: Gallup defines the various types of levels of engagement
engaged-these employees are also known as builders. They are impatient and willing to do the best of their ability. They are ready to know the expectations of their role so that they are able to face and exceed them. They are curious to know about their work place. They are highly talented and hardworking and like to give their 100 % at all times. They are passionate about their work and never take their work as a burden.

Not engaged- this category of employees are more concerned about the short-term task, they are quite away from the goal of the organisations. They work for the sake of doing it and want to get over with every task they perform as soon as possible. They never perform their work whole heartedly. Such people often feel that their work is not given enough importance or appreciation; they feel this way because they do not have healthy relationships with their fellow worker or managers.

Actively disengaged- this category of workers is also known as cave dwellers. They are highly negative regarding their work. They are highly unsatisfied with their work and they often show their unhappiness. They are pessimist and often create tensed atmosphere in the workplace. They transfer their negativity all around. Engagement is an important aspect of any organisation. It cultivates the feeling of commitment and satisfaction within the employees. When employee is engaged in their work, they give their 100% and work

for the benefit of the organisation. Engaged employees have a sense of responsibility and they work towards the required goals. Engaged employees provide the organisation with best results and high performance. An engaged employee will always deliver beyond expectations. –The Watson Wyatt consulting companies have proved that there is an intrinsic link between employee engagement, customer loyalty, and profitability. As organizations are becoming more dependent on technology in a virtual working environment, there is a greater need to connect and engage with employees to provide them with an organizational identity.

Engagement assessment: This HR practice plays a crucial role in every organization. Employees who are engaged perform to their full potential, they are motivated and can also improve their skills as they progress. Employee engagement plays a vital role in the hotel because it affects everything from retention and productivity to profitability and safety. In today's world organizations have found out various methods of creating competitive advantage. They have created competitive advantage through innovation, quality products, technology and pricing technology. Organizations view –customer service that exceeds expectations as their key to success. Engaged employees provide quality service. Now there are a numbers of jobs in every industry but organizations need to focus on the right people for the right job. They should also make sure that these right people are satisfied with their work.

In the hospitality industry many employees see their jobs as stepping-stones to more permanent positions, and employee turnover rate ranges between 78.3 percent to 95.4 percent. These numbers are staggering; more staggering is the cost of this employee churn. The Incentive Research Foundation estimates roughly 100 to 200 percent of an employee's base salary is spent to recruit and train a replacement. In an arena where customer service is paramount and the labor pool is shrinking, keeping employees satisfied and engaged is critical. ITC MAURYA measures the level of employee engagement in the hotel. It conducts the GALLUP Q12 survey on a yearly basis. An exhaustive study is conducted in different departments of the hotel on the basis of 12 questions. The Gallup conducts a survey and they give a small presentation in the hotel and they tell about the strongest and weakest departments in the hotel.

Initiatives: The management comes to know about the loop holes in various departments and they try to overcome them in order to increase employee engagement. Maurya undertakes various activities through employees can feel engaged in the work place. They have Maurya gazette, this is an internal newsletter which is made on monthly basis...This newsletter entails about the day to day happenings of the hotel. It also showcases department of the month. The employees those who are awarded as the employees of the month also narrate their experience that is also shown in this gazette.

They also have *Good Morning Maurya* which is a daily bulletin and it highlights the birthdays and lunch menu of the day. Some of the other activities are: Instant recognition, GM's tea, Retirement ceremony, Yoga and meditation camps, Health camps, Diwali tambola, Annual day, New year celebration, Open forums and Long service awards. Gallup's plays a vital role in the hotel. Employee engagement is of great importance in the hotel. The hotel has more than 100 employees in each department which is a huge number. The duty of the HR department is to take care of all the employees and the department ensures that the employees are well engaged in their job because only when the employees

are satisfied can they perform their 100%. The issue of a shortage of skills throughout the workforce is very important to the hospitality industry and the need to create a talent mix is recognized. Planning for future recruitment helps to accommodate the lack of essential skills in the modern HR environment. People are multi-talented and they expect a lot out of their job owing to this the employee engagement techniques are contemporary.

The Employee Side of the Human Sigma Equation: Human Sigma combines the power of two Gallup Consulting concepts: employee and customer engagement. The Human Sigma approach provides leaders with the means to reduce the variance in performance across organizational units. Research published by Gallup and others has shown that engaged employees are more productive employees. The research also proves that engaged employees are more profitable, more customer-focused, safer, and more likely to withstand temptations to leave. Many have long suspected the connection between an employee's level of engagement and the level and quality of his or her performance.

Performance Appraisal

Performance appraisal is a very important tool in any workplace. It helps in evaluating the behaviour of the employees in the workplace. It includes both the qualitative aspects of the job performance. It evaluates a person systematically including his on the job performance and his potential for development. It is a continuous process and its responsibility is totally on the supervisor. The supervisor makes sure that the work is in its place, he or she keeps a check on employees as to how the task assigned to them is performed. The supervisor tries to find out the weak points and try to cope up with the challenging situations. This process in an organization faces certain limitations like Halo effect, Error of comparison, Personal Bias, Leniency and incompetence of Appraiser. To make the process most effective the organizations should set clear defined standards, mutual understanding, selection of the right appraisal tool and constant review and feedback.

Process of Appraisal: The performance appraisal systems were formally communicated to the employees. Employees were well aware of the parameters of performance and also were satisfied with the systems. The performance appraisal system is based on the assessment sheet. The parameters of the sheet include: knowledge of work, planning organizations, delegating work, initiative & drive, personal efficiency, dependability, leadership, co-operation, honesty integrity, quality of work, punctuality, six sigma contribution. The parameters were assessed on a scale of outstanding, above average, average, below average. The performance is appraised by both appraiser and appraisees, Head of department, personnel manager and general manager. The sheet would contain information from all of the above. Appraisals are conducted yearly, in the month of February and March.

The process takes two weeks to complete. The appraisal depends on mainly the strength and weakness of employee and means to enhance quality of work of employee. The award system for appraisal is also in place. The head of department will decide the most deserving candidate for award. Performance Appraisal was found to be a two way process in the hotel, with the employer and the employee being equally involved in assessment. The process was designed to facilitate discussion and mapping of future goals and growth plans. The implementation of the performance appraisal process determined promotions, increments, training and development needs and best employee awards. The process differed across different levels; a combination of methods was used. It was clearly an

annual process. In case of severe deviations from the expected standard, the employee was given a warning letter, terminated, increments were withheld, promotion withheld and in some situations employee is referred for further training and development.

Balanced Score Card: ITC Maurya successfully uses Balanced score card method for its appraisal. Balanced scorecard was prepared on FIVE parameters, which are as follows:

1. Customer perspective
2. Financial perspective
3. Internal perspective
4. Employees perspective
5. Social perspective.

The innovative aspect was the fifth parameter of the social perspective, which was added to the Scorecard at ITC Maurya. The Balanced Scorecard was strategically oriented, and all the functional heads had a series of meetings with the HR department and the top management team. The BSC is supported by the career review form to further assess the employees.

Career Review Form: This form assesses the subjective aspect of measuring a person's performance which is fixed at 30%. The objective of the career review form is to encapsulate the Big Five (The five Perspectives). The key competencies and the feedback which needs to be given to the senior managers. secondly, to allow inputs taken on key parameters and assessing the potential for future growth. It is done in cohesion with the Balanced Scorecard. It comprises of five sections.

Section A-The big Five/Self-Assessment

* Revisiting the Big Five

* Providing background against which the employee performed

* Providing a framework to prepare for appraisal discussions

Filled by: Assessee

A1: Specify Departmental Objectives

A2: State Big five at the beginning of the year and achievements: Example: ?

A3: Factors which aided/hindered performance

Future Outlook: The Company has adopted various positive engagement and performance oriented objectives, however the future growth of the company will be determined by the enhancement of additional strategies. The drivers of engagement are the key focus of the company, the workforce has to reflect uniform positive levels of engagement. The focus on the drivers of engagement namely Career, Community, Congruence, Compensation, Content, Coping will further involve each employee. The process of appraisal will be blended with the requirement of the work. The appraisal process may align with the following aspects: process being Trait based, Behavior based, Knowledge or skill based, Result based. The Hotel aims at ideally using a combination of all these aspects for appraisal.

Focus of the organization is on increasing job understanding, remedial performance improvement, career development, employees efforts focused on specific tasks, increasing output, HRP, linking pay and performance, improving team work. Peer rating being an important part of the process, building a system of peer assessment to add value to the feedback collected by reviewers. Rating by customers, suppliers, outside experts and

clients provides an important insight into the study of appraisals. The measurement of the results to strengthen the existing processes and further additional three elements: dimension, measures and standards to the appraisal. Usage of forms which are more qualitative than quantitative, as using qualitative forms can cloud judgment and impact decision making.

The focus is on taking care of its people and developing them at every stage. Maurya is a 27 year old hotel and majority of the employees are working here since many years. Moreover, the trade union of this hotel is very strong and thus the employees have an emphatic backing from the union. The top management at times faces problems with the union and has to ensure that all its policies are people centric. It organizes various activities for its staff and provides welfare amenities. Daily meetings take place for every department and Saturday training sessions for all the head of departments. Various informal activities are organized to facilitate an open and friendly environment in terms of organizational work arrangements.

Every department designs its own feedback forms, which the employee has to fill from time to time. Despite these efforts at times the people working in the organization since many years tend to command most of the decisions. Except for one respondent, every employee interviewed supported the open culture facilitated at Maurya Sheraton. Authenticity is close to openness, the employees don't feel hesitant to come out with their views and own up their mistakes, as Maurya's culture doesn't believe in firing people for every small mistake unless and until it is really drastic. Various cross-functional training sessions and other informal sessions are organized to facilitate better employee relations. Running the gauntlet to more effective, purpose based performance management is a high risk, high reward endeavour. Many myths may be dispelled and many traps avoided. A successful run requires significant investment, sustained commitment and the underlying belief that performance management is a core business process that can create competitive advantage when done well.

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Individual Innovation and Organizational Success: Theoretical Perspective

Ritu Tewari*

Abstract

In the 21st century knowledge-based society, innovation and creativity are pivotal to personal, social and economic development. Innovation has covered a wide spectrum; it has become a rolling agenda of the corporate world. A growing number of practitioners and academics endorse that the ability of organizations to foster, develop and use the innovative potential of their employees contributes to organizational success. Innovation is the most effective measure for organizations to maintain their high performance levels. The main aim of this study was to building a multiple-perspective framework for understanding innovative work behavior (IWB) and designing managerial strategies to encourage employee innovativeness. It was suggested that individual innovation served as problem focused strategy to cope-up with many individual, group related problems and organizational related problems.

Key-words: Knowledge-based society, Innovative work behavior, Individual Innovation

„Innovation and creativity are the keys as no progress can be achieved by just repeating history, unless one makes a conscious effort to make a new one, always and every time“.

–Mahatma Gandhi

Introduction

As we moved from industrial economy to knowledge economy sometimes ago, time has now come to make further transitions to what we may call an –innovation economy. If financial and structural capital represented old economies, present corporate boast of their market value, which would be many times over, when compared to their physical assets value. Intangible assets, like brand equity, marketing capability, patents, progresses, technologies and managerial skills, constitute, what is called ‘_intellectual capital’ which would now create new wealth.

When encouraged, people tend to imagine (imagination capital) resulting in innovation, where the newness could be just either incremental or radical. In either of the cases, the creativity phase gets started, leading to the implementation of a new idea. The process ideally should start with the identification of a problem, finding option of various creative solutions, discussing them in a team or group and then finalizing one. Thus no innovation becomes the product of a single creative mind but is the culmination of the thought processes of a large number of such minds.

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So we can say, innovation is the process of creative and novel idea to put it into some practical use ; and an innovation in a work organization implies change in status quo .Innovation promises strategies for meeting the challenge of change in work organizations .By developing a more sophisticated understanding of the process and outcome of innovations ,it may be better understood how organizations can evolve to meet the challenges of change for fulfilling the expectations of internal as well as external stakeholders.

Leaders of successful, high-growth companies understand that innovation is what drives growth, and innovation is achieved by awesome people with a shared relentless growth attitude and shared passion for problem solving and for turning ideas into realities. The focus of innovation is to allow the organization to respond to an external or internal opportunity, and use its creative efforts to introduce new ideas; processes or products.it involves workers at every level in contributing creatively to a company's development, manufacturing, and marketing. By utilizing appropriate innovation management tools, management can trigger and deploy the creative juices of the whole work force towards the continuous development of a company.

Literature Review

Previous studies suggest that organizations can indeed benefit from individual innovation. Campbell, Gasser and Oswald (1996) empirically demonstrated a positive link between innovation-specific behaviors and organizational performance. Miron, Erez and Naveh (2004) found that individual innovation does not diminish the quality and efficiency of normal work. Employees are well able to balance between being innovative and paying attention to their regular work. They conclude that personal and organizational characteristics necessary to promote innovation, quality and efficiency complement rather than compete with each other. In this context, Getz and Robinson (2003) posit an interesting rule of thumb: companies that track the source of improvement ideas find that 80% of improvement ideas come from their employees and only 20% come through planned innovation activities.

Previous work on individual innovation and organizational performance says that individual innovation is closely related to organizational performance. Thompson (1996) defines innovation as the generation, acceptance, and implementation of new ideas, processes, products, or services. According to Zaltman et al. and Rogers (1995), it is an idea, practice, or material artifact perceived as new by the relevant unit of adoption. Amabile et al. (1996) define innovation as the successful implementation of creative ideas within an organization (1998). The innovation process involves the acquisition, dissemination, and use of new knowledge (Verona, 1996). There seems to be wide agreement that learning climate and innovation capability are highly correlated, and many authors have called for an examination of how they are linked (Goes and Park, 1997)

Theoretical Framework

The term ‘innovation’ means a new way of doing something. It is a positive change to make someone or something better. Innovation leads to increase in productivity and is the source of increasing wealth in an economy. It is the intentional generation, acceptance and implementation of new ideas, processes, products and services ultimately for the actual utilization of economic or social value.

The past decades have witnessed a growing body of literature dedicated to innovation. Schumpeter (1934) is considered to be among the first to recognize the process of innovation and its impact on economic development. He described innovation as the creation and implementation of ‘new combinations’ related to new products, services, work processes or markets. Ever since, innovation has been re-defined many times. Each definition may reveal some important aspects of innovation, but the most common element is that all authors emphasize newness as an essential part of innovation.

King and Anderson (2002) considered an innovation as something new to the social setting in which it is introduced (an individual, group, firm, industry, wider society) although not necessarily new to the person(s) introducing it. At last we can say that Innovation is a social process in the sense that there is an interaction between those who innovate and those who are affected by the innovation; and there is recognition that one’s action will affect others and will influence that action.

Types of Innovation

The review of the literature indicates towards different types of innovation which are as follows:

- *Programmed innovations*: These are likely to be routine and generally scheduled to put into use in advance.
- *Pro-active innovations*: These characteristically involve an individual or group seeking to draw the organization’s attention to an area where the need for change was not previously recognized.
- *Slack innovations*: These are stimulated by the availability of the slack resources.
- *Distress innovations*: These occur in response to pressing problems.
- *Technical innovations*: These are directly related to the primary work activity of an organization including new elements in production processes, new product development etc.
- *Administrative innovations*: These are concerned with relationships between people interacting to accomplish work tasks and goals, and those rules, roles, procedures, structures are related to communication and exchange among people and between environment and people.
- *Management innovations*: These are concerned with novel changes in problem solving, decision making in implementing various business operation with greater efficiency, better coordination and control, and greater human behavior management in order to ensure accomplishment of organization goals.
- *Product innovations*: these are concerned with the development and marketing of new manufactured products or newly created services.
- *Ancillary innovations*: These innovations go beyond traditional and primary function of an organization, and that are pertaining to service which are provided by organizations to the community even outside of the organization’s boundary.

Individual Innovation and Organizational Performance

When attempting to improve organizational performance, there are two approaches which may be taken, either individually or together: individual innovation and organizational innovation. Individual innovation is, of course, the creativity of the individual. Everyone

has a creative comfort level which is based on their natural creativity quotient, their willingness to risk new ideas and their personality. People can be trained to think more creatively and to apply creative thinking strategies to various activities. Naturally creative people have ideas all the time and like to share those ideas. Organizational innovation, on the other hand, is the creative capability of an entire organization. One method of boosting an organization's innovation, of course, is boosting the creativity of the individuals within the organization.

Now the question arises, what are the components of individual innovation? A variety of theorists, using case studies, experiments and a variety of research methods have attempted to better understand the components of innovation in individuals. Teresa Amabile has provided the field with one of the most simple and yet comprehensive frameworks. Creativity arises through the confluences of the following 3 components:

- *Knowledge:* All the relevant understanding an individual brings to bear on creative effort.
- *Creative Thinking:* Relates to how people approach problems and depends on personality and thinking / working style.
- *Motivation:* Motivation is generally accepted as key to creative production, and the most important motivators are intrinsic passion and interest in the work itself.

Process of Individual Innovation

Ideas are necessary conditions for innovations. They are a starting point, but it cannot be called innovative without further development efforts. There are a number of models proposing various stage of process of innovation. The model most commonly used to describe the process of innovation is the activity-stage model (Zaltman, Duncan & Holbek, 1973; King & Anderson, 2002). This model focuses on the actual activities that are carried out to develop a new product, service or work process by breaking down the innovation process into a number of activities. In its most simple form activity-stage models distinguish between just two phases: initiation and implementation.

Initiation is a divergent phase, including activities such as the recognition of problems and thinking about ways to improve things. This phase results in more suggestions for innovations, such as new products, services or work processes. Implementation is a convergent phase directed towards the development and launch of innovations in order to acquire their benefits. The dividing line between the two phases is believed to be the point of the first adoption of the innovation; that is, the point at which the decision is made to implement the idea (King & Anderson, 2002).

The vast majority of senior executives appreciate the fact that innovation can occur throughout the organization, not just in the executive offices. Innovation is about the employee who works to achieve the organizational success. In order to boost individual innovation, it is critical that the organization create an innovation friendly environment that includes:

The Top Management Team: Individual members of an organization will be more identified with the goals of the organization and concerned about its success if they participate in making decisions about those goals and how to reach them. Being a member of a management team gives group members a feeling of greater control over their lives; it

frees them from the fear of the leader's arbitrary use of power. When group members participate in solving the group's problems, they learn a great deal about the technical complexities of whatever the group's task is; they learn from each other, as well as from the leader. Developing a management team is the best kind of ongoing staff development. A management team helps break down status differentials between the members and the leader, which fosters more open and honest communication between members and leader. A management team becomes the principal vehicle enabling the leader to exemplify the kind of leadership behavior he or she wants the group members to learn and use in relationships with their subordinates. In this way effective leadership moves down the level of organizations.

Cross-Functional Teams Leading Innovation: In the new era of systemic innovation, it is more important for an organization to be cross-functionally excellent than functionally excellent. Firms which are successful in realizing the full returns from their technologies and innovations are able to match their technological developments with complementary expertise in other areas of their business, such as manufacturing, distribution, human resources, marketing, and customer relationships. To lead these expertise development efforts, cross-functional teams, either formal or informal, need to be formed. These teams can also find new businesses in white spaces between existing business units.

Teams of Empowered Employees: Hire and empower the brightest people with the greatest specific skills-sets. Attracting and retaining awesome people is the key. Awesome people have talents, skills and expertise your company needs to drive growth. They share your values, and they embrace change. These people need to be organized in groups effectively to be able to achieve the desired results. Make sure that your team members understand how they fit into the system as a whole - this understanding will improve their performance and contribution to the overall organizational strategy.

Creating a Culture of Innovation

All companies recognize intellectually that innovation and culture are both important to success. Yet few have explicitly defined strategies for linking and influencing culture and innovation to achieve specific business goals. Most companies have default innovation cultures in which various values, norms, assumptions and beliefs all compete for influence over employees' actual behavior. The dominant ones that win out ultimately shape the culture.

Culture is the environment that attracts awesome people and enables them to thrive and perform at their best. It needs to be highly participatory, people oriented and attractive to people who share your mission, vision, and values. Communication must be open, effective and continuous. Everyone must have an opportunity to be involved in planning, decision making, take calculated risks, make mistakes without fear of punishment, and receive fair rewards and recognition for performance.

Conclusion

In business today it is essential to innovate. Firms need to continuously renew and improve their offerings to secure long-term survival, profitability and growth. Innovating quickly and effectively is an advantage for achieving competitive advantage. As a consequence innovation is no longer reserved for those organizations and people doing

scientific or technological work. One option for organizations to become more innovative is to encourage their employees. Many practitioners and scientists now endorse the view that innovation by individual employees is a means to foster organizational success

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Co-Working Married Couples: The Scapegoat of Recession

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Abstract

Economic recession made the experts rethink of all established models practiced by organizations. One such episode of concern for an employer at tough time is the management of coworker couples. The reengineered management concepts and philosophies overtime have given rise to many such couples to come to the same platform to contribute. The recession tailed with retrenchment now gives the organization a challenge in dealing with these couples. The decision to retrench both or one of them could bring in many complexities, not only to the organization but to the family also. The article explores various aspects to this working phenomenon along with the circumspections in future.

Key-words: Married couples working together, Recession, Retrenchment

Introduction

The recent economic recession which outburst in US and spread all over the world has made management experts and financial consultants to think of new models in running business. Each and every practice followed is now been critically scrutinized to find its defilements when faced with crisis situations. An area which comes under the aegis of people management which got struck with recession is employment of married couples in the same work place.

Couples enacting the role of both husband/wife and an employee are becoming quite common in the industrial Platform. The same can be the position of an intimate colleague or a mutually respecting superior and subordinate working in the same building, sometimes in the same floor or the same room. The changing work and family culture over these years, stiff competition and high attrition rate has lead organizations to act according to the mind set of their blooming employee and to take steps to promote their requirements. The more want from families for double income also has added fuel to this new work phenomenon. Management experts, organizations and employees have taken the positive aspect of this work culture and promoted the same considering it at par with normal employment.

The other side of this employment practice came up along with the recession, faced by almost all countries in the world. Recession demands mass cost reduction measures. A strategy popularly followed by most organizations, accepted widely as a measure for cost reduction is retrenchment. The employees started receiving the shocking news of losing their job or are expecting it at any point of time. This measure doubled its strength when married couples loosed both of their income source creating high risk for their future life and family. This is the right time for rethinking about this work culture, as it becomes not

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only difficult for the working couples but also for the organizations that follow good employment practices.

Recession: Creating Global Unrest

Recession is defined as a period of reduced economic activity, a business cycle contraction (Encarta, 2008). Generally we say a country facing recession when its gross domestic product (GDP) for at least two quarters face reduction (*Business Dictionary: 2008*). The National Bureau of Economic Research of the United states defines economic recession as a significant decline in the economic activity spread across the economy, lasting more than a few months, normally visible in real GDP growth, real personal income, employment (non-farms payrolls), industrial production and wholesale retail sales (National Bureau of Economic Research: 2008). In general any country falls under the dark wilt of recession, if its growth rate comes down and, people in general, fail to get the returns back.

The recession that hit the US economy in the 1930's, 1970's and 1990's are history. Unlearned from that, the same continues hitting the society much more harder. As said by Barry Eichengreen, 'Policy makers must learn from history, but they should know which historical episodes to look to' (Eichengreen, 2008).

The recession, the world is facing now is having much more impact as the business is interlinked across nations and societies. The world has created a net to trade where a spark at one end reaches the other within a fraction of a second. As per International Monetary Fund, global recessions are periods when global growth is less than 3% (Kenneth Rogoff: 2002). Recession not only creates bankruptcies, credit crunches, deflation or foreclosures but also creates unemployment which affects many families all over the world. The recent recession as a result of the collapse of the housing market in the US leading towards bank collapses (Grynbaum & David, 2008) is no way an exemption. The same has affected not only US or UK but other countries also, that too in much more intensity.

The Canadian economy is predicted to contraction to 5 percent compared with 4.5 percent of that of US (McMullen, 2009). Japan, the second largest economy in the world contracted its gross domestic product at an annual rate of 0.4 percent from July to September, marking the second consecutive quarter of negative growth. The economy minister warns the situation to be worse as reported by Washington Post. Even the profit of respected companies such as Toyota, Honda and Canon in Japan have been slashed by as much as 70 percent (Blaine Harder: 2008). According to reports a considerable decline in real economic activity in Germany may be expected for the winter half year of 2008-09, where employment rate in major sectors coming to a standstill. The IMF also predicts a damaging immediate future for South Korea with its economy contract by 4 percent (Chandrashekar & Ghosh, 2009). In short, recession has hit on all regions in the world with a predicted worse state, in the coming future.

Recession and Job Market

Human Resources: The Cost Factor: Humans are considered as assets of an organisation. Many authors have quoted the same as the most important element in deciding an organisations profit. For companies that have access to the same technology, human resources make the real difference in achieving Organizational goals (Mondy & Noe: 2006). All HR principles and practices emphasize the importance of maintaining long term

relationship with people. Quoting Jack Welch, former chairman of GE, –the only way I see to get more productivity is by getting people involved and excited about their jobs! (Tomas A Steward, 1991). A survey conducted among 377 CEOs from the world's 2000 largest organizations opines that they spend a great deal of time reshaping corporate culture and employee behavior, even more time they spend monitoring corporate financial information. (Gary, 2005)

The question that arises here is when the concept of People management has traveled all the way from labor relations to Human Capital Management, why employers choose their people as the first option to be sacked when faced with tough times. Are these comments made by employers just to showcase their HR practices to stand along with others or is it that the HR can be considered at good times only, where a study conducted found that 70 percent of companies with above average financial performance considered employee training and development a critical factor in corporate success and these companies help build their competitive advantage by developing their human capital (Management Review: 1998). The organizations may have a strategic answer backing its long term existence and broader perspective of saving the firm rather than the individual. One indication that is generated as part of recession is that the human resources are considered as cost, which has to be sacked at bad times.

Recession affecting Job market: The frightening aspect becomes vicious when a study conducted by Government of India comes out with a huge figure of unemployment as a result of recession. As per the survey conducted by the Labour Bureau under the Ministry of Labour and Employment, nearly five lakh people have lost their job between October to December 2008 as the result of recession. The study covered eight major sectors like Textile and garment industry, Metals and metal products, Information Technology and BPO, Automobiles, Gems & jewellery, Transportation, Construction and Mining industries covering 20 centres across 11 states (The Business Line: 2009). This pattern of unemployment popularly known as cyclical or Keynesian unemployment (wikipedia: 2009) is not only affecting India but on almost all part of the world.

Referring to the study report of the Bureau of Labor Statistics in US, Non-farm payroll employment fell sharply in January 2009 and the unemployment rate rose from 7.2 to 7.6 percent making nearly 598000 people losing their job. The payroll employment has decreased to 3.6 million since the start of the recession in December 2007. As per the statistics the number of un- employed persons over the past 12 months in US, has increased by 4.1 million and the unemployment rate has risen by 2.7 percentage points. (Bureau of Labor Statistics: 2009).

A report published at the credit crunch summit in London projects that two in five of jobs that could be at risk over the next two years are in London and the South East. The report also projects that 370000 jobs could be lost in London alone which comes to 7.9% of all jobs (Local Government Association: 2008). The report from The Chartered Institute of Personnel and Development (CIPD) which is forecasting a redundancy where 300,000 lose their jobs, is also worth noting at this point. The institute warned that unemployment would continue to rise in 2010, taking the total number of jobs projected to be lost over the course of the recession to about 1 million (Kathryn Hopkins and Chris Tryhorn: 2008). Most of the forecast reports for UK economy predicting an average GDP fall by 2.4

percent during 2009 reaffirm the risk involved through retrenchment measures (Western European Union, 2006).

Not limiting the unemployment situation with UK or US alone, the Organisation for Economic Co-operation and Development opined that 25 million jobs could be lost around the world as the financial crisis worsens (Kathryn Hopkins and Chris Tryhorn, 2008). Japan is another country that faces hard time due to recession as reported by The Guardian. Unemployment rate rose to 4.4 percent in December, its biggest monthly rise for 42 years, from 3.9 percent a month earlier. The jobless total has risen over the last year by 390,000 to 2.7 million. (Justin McCurry: 2009). Nissan motors of Japan announced a cut of 20000 jobs as it fears its first annual loss (The Business Line: 2009), is only one among many. According to the Turkish Statistical Institute (TUIK) the official unemployment rate rose to 10.3 percent in the three-month period of August to October 2008, up from 9.8 percent in July-September 2008 in Turkey and the same is expected to increase substantially in 2009 (Sinan Ikinici, 2008). The ILO report also says that the largest increase in a regional unemployment rate was in the Developed Economies & European Union region, from 5.7 to 6.4 per cent compared with 2007. The number of unemployed in the region jumped by 3.5 million in one year, reaching 32.3 million in 2008 (International Labor Organization, 2009)

Organizations go for the firm's viability rather than its people security is what these statistics speak about. Organizations argue for retrenchment with the rationale of cutting cost to the maximum and protecting highly skilled employees. Organizations consider many aspects before retrenchment. The most common one being seniority (Gary, 2005). The International Labor office at Geneva on their Termination of employment convention held in 1982 clearly specifies the rules and regulations for termination, as an employment of a worker shall not be terminated unless there is a valid reason for such termination connected with the capacity or conduct of the worker or based on the operational requirements of the undertaking, establishment or service. The convention also says that all other possible measures that would avoid termination should be considered before taking a step. (ILO: 1982) Economic recession surely is a reason for retrenchment. The effect of this retrenchment will be different for different class of people based on their background and economic stability. Positively taken, the employers rationale, such retrenchments provide the concerned organization with oxygen to sustain its breath with an expectation to come back to life in future and thereby provide more employment opportunity. Retrenchment being one of the best option, an organization can choose as a response to poor macroeconomic conditions, the only expectation for the labor community will be of fair retrenchment procedure.

Co-Worker Married Couples: The Scapegoat of Recession

Retrenchment figures do not communicate the complete story. It extends to many more number of families, children, dependents, and the society as a whole. Families with single income strive for living and families with double income feels depressed in their reduced income. Coworker couples being a community that lived with luxury double income earnings, is now under the risk of losing both or at least one of their income thereby falling under the umbrella of extreme 'Job Loss Stress'.

Co-worker married couples are a community that cannot be ignored by any administration due to their increased population and influence in the work place. It has now been viewed as a common and acceptable workplace relationship. The same was not the situation years before. There are many factors that took married couples being comfortable under the same roof. The route which brought a husband and wife under the same umbrella is detailed below.

Women getting entry along with men in the work place

Any country or society taken into consideration, married couples working together is not a novel idea or news. It has become so common that any workplace one steps into, will include a couple of such kind. The same was not even thought about when work place was purely ruled by men. The first change that happened was the increasing role of women in the work place along with their male counterpart.

Even until the late 1800s, men and women seldom mixed socially after marriage. Only In the 1890s, women began to move into the workplace, albeit in subordinate roles (Psychology Today, 1995). This beginning of women's participation in work place has not taken a big shift in the initial stage. Even in America, which is considered to be one of the developed nations in the world only one-third of women of working age had a paid job in 1950 (The Economist, 2006). Even in the 1970s, if we take the picture of women working in an organization, studies say that 99 of 100 business travelers were men (Psychology Today, 1995).

The globalization phenomenon changed the business scenario, which existed in every part of the world so quickly. Considering the statistics in America alone we can understand the rising percentage of women entering into business. From a stage where only one third of the women were working it has gone up to two third where if we take three families, two of them would contain a women employee. (The Economist, 2006). As per the recent statistics available, 65 percent of the American women aged between fifteen and sixty four are employed. (The Economist, 2006). The position that has reached now has contributed to various changes in management styles and practices in organizations. In fact, almost everywhere in the world more women are employed and the percentage of men with jobs has fallen. In certain countries like Denmark and Sweden the women employment has even crossed the 70 percent mark (The Economist, 2006). There are only a few exemptions for feminization of the workplace like Italy, Spain etc. where women's share of jobs is still 50% or less (The Economist, 2006).

Considering the Indian situation, the scenario is not at all different. With the current trend of transparency and equality taking place in India, women have been into various positions on the corporate ladder and also they have established themselves. (Ramanujacharya. S: 2001). The agriculture sector in India shows a growth of 26.6% and manufacturing sector with 22.3%. Electricity sector increased women participation with 150.5% and construction 15.3%. Trade showed an increase of 40.8 and Finance and Insurance 237.8% even in the year of 1988 compared with 1977 (Indian Labour Year Book: various years).

When women enter the workplace massively, it is quite obvious that the probability of more couples being formed increases, as more married couples preferring to work in the same place or an unmarried employee liking to marry someone from the place he/she

works. How does this phenomenon happen? Should it be attributed to the decision made by the partners to work together considering the advantages or can this be the result of an accidental coincidence that happened which brought the partners together. But with these reasons alone it won't be comfortable for the husband and the wife to play dual roles. For that to happen the management of a firm should be ready to accept the change.

Managers Dilemma on Co-worker Married Couples: Re-Engineered

Traditionally the attitude of management of an organization towards co working couples was not positive. They considered it as nothing but trouble, creating favoritism and sexual harassment. According to Mary Loftus –For decades, the professional literature on love at work has focused solely on the negatives of such relationships (Mary Loftus, 1995). This attitude continued even in early eighties with the management. The negativity was so imbibed into the heart of people where the former editor of the Harvard Business Review, Eliza Collins, declared in 1983 that when love blossoms between executives, it can "break down the organizational structure" and should be treated as a conflict of interest between the couple and corporation. (Mary Loftus, 1995).

The scenario even though was strong enough, could not compete with the changes happening to the society in general and to business in specific. The culture changed and the management style took new forms. The employees also were not much concerned with respect to their officer's attitude, and a situation emerged where romantic relationships and marriages between co-workers could not be stopped with written rules and regulations. It is more evident as referring to a poll conducted by The Fortune, where it was found out that romances between workers are none of the company's business and more than half of the chief executives surveyed said that they have noticed more married couples at the office than ten years ago (Anne B Fisher, 1994).

Some organizations give more caution where even if they promote married couples to work together, constant monitoring is made to see whether it is having any negative impact on job performance as done in Ernest and Young where a managing partner will review the situation to ensure that there are no potential client-service difficulties or conflict of interest. If there exists a potential problem one person may either have to assume other responsibilities or if irresolvable may have to leave the firm (Prasad, 2007). Some other organizations took it as preventive measure towards their employees from entering into relationships that can harm the image of the organization. A recent survey conducted by The Week says that Companies promote employees getting close provided it goes to a marriage relationship with a view that this will bring an end to various dating and sexual relationships existing in offices. (The Week, 2006). As the result of changing attitude of management and work culture, employees get an open way to decide to choose a career along with one's own partner. It can be the result of a workplace romance or through recruitment/referral process.

The sexual integration of the workforce, an increase in age at first marriage, and longer work hours, has made the office a natural place to find an intimate confidant, sex partner, or suitable mate and is healthy (Mary Loftus, 1995). An important variable for romances and then marriage in work place is the geographical proximity and long working hours, spending together. A survey reported that, 94 percent of the office romances were between employees in the same building and 34 percent were in the same or adjoining offices

(Mary Loftus, 1995). This is because, of the opportunity they get to share emotions and family issues which would help the employees become closer with each other. The New York Times profiled a couple who conducted a prolonged correspondence through the interoffice E-mail before their wedding (Mary Loftus, 1995). What determines the direction of such kind of relationship in a workplace is the culture prevailing in the organization, the policy they have with such kind of relationship, the value given by the people for the relationship they are engaged with and last but not least the personal characteristics.

If not through a romantic relationship with a colleague, then the partners have to depend, one way or the other, with the recruitment board of the company where they intend to work together. The same or both of them attending the selection process and getting in to the same organization or one referring the other to the same work place. According to a recent survey by Wall Street Journal, of large companies, the largest share for new employees hired (about one third) came from referrals (Jessica Mintz :2005). Employee referrals have been the source of almost half of all hires at AmeriCredit since the firm came with its -you've got friends, we want to meet them' Employee Referral Program (Michelle Martinez, 2004).

Organizations facing high rate of labour attrition, may find this as a panacea with a belief that if they could take in both the partners, their continuance in the same workplace for a long time is guaranteed. The job seekers also find many advantages. Convenience in travel to the work place, opportunity to share everything, moral support for all matters arising out of work, or at least a platform where both can see always make it a fair deal for them.

Co- Worker Couples and Retrenchment

The U.N.'s International Labor Organization (ILO) came with a report in January end 2009, predicting a loss of 50 million jobs worldwide by the end of 2009 making 200 million workers into extreme poverty, where the total number of working poor will be 1.4 billion (International Labor organization: 2009). When a big population coming under the aegis of coworker couples, and millions of jobs being lost as a result of economic shock, there is every possibility of one or the two to be send out of the workplace. Articles started stating even with the unavailability of statistics, the state where co-worker married couples losing their twin source of income at once as a result of recession, with the one published by the Associated press (Melissa Nelson, 2009).

Every nation is having their own laws to lay down the procedure for retrenchment. Even with a fair policy, organizations can choose non-performers to be the first prerogatives to be sent out. A survey on retrenchment practices amongst Indian corporate's conducted by Watson and Wyatt's says about the changed culture of progressive companies in the direction of sharper commercial focus to ensure that their staffing levels truly match the real needs of the firm (Watson and Wyatt's Survey, 2002). Considering a mercy from the part of organization would be too illogical as at this moment as the organizations consider aspects that would make their loss least, where the performance ratings and potential appraisals play a big role. Who will be the first among the married couple to loose, is the question that could find an answer based on the company's policy and their strategic objectives relating to retrenchment. It is evident that a couple would not prefer to relocate to any other place provided the partner is also accompanying.

A 2004 survey by the outplacement firm, Challenger, Gray & Christmas showed a sharp drop in the willingness of displaced managers and executives to relocate—the primary concern cited was a working spouse. According to the study, the relocation rate of displaced executives with employed spouses declined 54 percent between 1995 and 2004. (Pingle, 2006). The common economic model of migration, built in the framework of a human capital model by Sjaastad (1962), implies that in order to relocate, the present value of all future gains from moving need to outweigh the costs. Hence it can be concluded that any employee sent out of the firm would create de-motivation to the other and to the family as outweighing cost at the time of recession would be difficult to happen.

Considering the above aspect, the possibility of an employee to be de-motivated and be a non-performer in future as a result of his retrenched partner cannot be ignored and, organizations choosing both of them to leave together also may not be a rare case. Organizations taking advantage of retrenchment also is not unheard news as already in India, the leading trade union has started agitation approach to demand government's intervention against retrenchment and repression of employees in the name of recession claiming it as Hitler's notoriety (webindia123, 2009).

There are many more implications for a decision to intervene with married couples working together in the same work place as part of retrenchment scheme followed by recession. Harvard law professor and bankruptcy expert Elizabeth Warren stands against two-income families where she says that their response towards a financial disaster will be more vulnerable than a single earner family as they lack the safety net provided by a non-working partner (Arndt, 2003). There is every possibility for the dual earner families to live more luxuriantly as their debt paying capacity is more. As commented in an article, even one job loss, can be enough to drive this type of family under, as when left with one income, servicing the level of debt becomes difficult (Arndt, 2003). Alan Oster, Chief economist at the National Australia Bank, points out clearly that the two-income trap will be applicable on a tough time for the country (Arndt, 2003). As commented by Elizabeth Warren and Amelia Tyagi, in their book, *The Two Income Trap*, two-income families are almost and always worse off than their single-income counterparts were a generation ago, even though they pull in 75 percent more in income (Plumer, 2004). The same seems relevant in a society where many reports have come showing the increased number of double income families all over the world (The Economist, 2006)

There are also arguments from various sources that women among the couples may be inclined for more number of job loss. Reports say that women employees are more affected by recession as factors like ethnicity, disability, skill level, social class and childcare responsibilities will pop up as factors which organizations show least resistance to compromise (Recession report: 2009). As reported by the Telegraph, latest official employment statistics in UK show that the number of women in full-time work fell by 53,000 in the last quarter, compared with a fall of 36,000 for men. The matter was seriously discussed in the National Economic Council in their meeting held recently where ministers bringing the issue and its seriousness (Leach, 2009). Even when Institutes like the Chartered Institute of Personnel and Development, stands against it as Dr John Phillpott, chief economist and public policy director at the CIPD, observes it as the result of more women being in the workforce than in previous recessions (Philopot, 2009), the

Prime Minister agreeing to dedicate a session of the G20 meeting of the world's economic powers, keeps the issue live (Ben Leach, 2009).

Coworker couples: Shielding future recessions

Men, Women or both, the point to be emphasized here is the risk involved in people investing their complete source of income at the same place. The recession period gives the working class to redesign their co-worker portfolio as well as management experts and practitioners to rethink, such kind of employability. As the employees work for the same employer, the pros and cons have to be faced together. The risk is involved not only when both lose their jobs but also when one faces with retrenchment, the former being more intense. More than a working solution for coworker married couples to get out of this trap, it would be more reasonable to work out a model for future employment practices which could shield the recession. Thinking logically and constructively is the only method to solve problems as observed by Steve kneeland (Kneeland, 2000). The options primarily, employees can think is investing the capital in two accounts rather than depending on a single work place. Same locality, work life balance and commuting preference can be included along with other considerations to compromise with the environment created by co-worker couples. As studies have correlated factors like non work leisure's, education, career choice along with Income for satisfaction (Daniel Nettle, 2005), such factors also need to be considered, where the employee will be accustomed with the situation and would learn to ignore the absence of the partner in the work place.

Even if the couples are in the same work place the focus should only be to be a coworker couple and not co-career couple where the risk at hard times would be multiplied. The advancements made in one's career should be constant and never-ending where he/she never becomes obsolete in the job market. The working couples should also smell even the minute change happening in the labor market. The organizations should be responsible to create a cushion to these working couples if they have to leave the place. The same can be through avoiding both of them losing the job at once, mentoring them to seek another job, providing enough time to leave the work place and creating the sense of necessity by imparting enough learning on the crisis the organization is facing.

Conclusion

Recession is not going to land soon as it flies high creating damage to the world economy and millions of families all over the world. The IMF comes out with a damaging projection where the Global growth in 2009 is expected to fall to half percent, when measured in terms of purchasing power parity, and to turn negative when measured in terms of market exchange rates (Chandrashekar & Ghosh, 2009). The International Labour Organization report says that global unemployment rate in 2009 could increase to 6.5 percent from 5.7 percent in 2007 (International Labor Organization, 2009).

This makes clear that married couples working together will have to face tough times ahead. They should be ready and be motivated to work alone for the high risk time where they lose both incomes at the same time. They also should seriously think of a new working pattern where they invest themselves in two portfolios where the risk from one will be compensated by the other. This gives a thinking knot to organizations also where married couples working together is promoted, as no organization with a good HR policy prefer to see their human resource capital being pauper and finding difficulty for

livelihood because of them. This can create a negative energy among others who continue to work with the organizations creating a long lasting effect and doubtful prejudice about their employer.

There is every chance for the organizations to be less magnanimous with married couples by sending both of them out, as they are pretty sure with the imbalance in the motivation level on an employee if one of them is sacked. According to Richard Levin, a psychologist who is chairman of work-life enterprises in Brookline, Massachusetts, says that in his consulting practice he sees a growing number of totally efficient couples where they commute to work together in the morning, drop off a child or two at a company sponsored day care center, and go off to their jobs. Often they have lunch together and they discuss matters arising out of their work, or simply to spend an hour enjoying each other's company and at the end of the day they head home together (Fisher, 1994). From this level of co-worker partnership if one is sent out of the company, the other reacting negatively is quite natural. Different models need to be experimented to provide a working solution to this issue relevant in the work place.

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A Quasi Experimental Study on Leadership Effectiveness and Ethics

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Abstract

This research study is planned to arrive at an index correlating leadership traits and business ethics and formulating coaching plan to change behaviour of target executives to bridge gap between two, if exists. Study also contributes in the area of sustainable ethics as it proves relationship between effective leadership and integrity in organizational context. This relationship will help to infer actions of top leaders in above scandals and it can help organizations to devise their training & development plan for preparing their leaders to remain ethical in tough times.

Keywords: Leadership, Ethics, Coaching

Introduction

Managers are important group with strong impact on both practice and principles of corporate governance. With the increasing complexity and dynamism of business environment, managers are witnessing a clash between norms towards basic stands of rights and wrongs. With the events of the Enron, Satyam and 2G scandals, lots of questions are asked on the integrity of the leaders. In this paper, we try to correlate leadership effectiveness with the integrity of a leader. We will see whether there is any relation with the leadership abilities of a person with integrity of that leader.

Theoretical Review

Leadership Ethics: From the perspective of Western tradition, the development of ethical theory dates back to Plato (427 – 347 BC) and Aristotle (384-322 BC). Ethics is concerned with the kinds of values and morals an individual and society finds desirable or appropriate. It signifies the virtuousness of individuals and their motives.

In regard to leadership, ethics has to do with what leaders do and who leaders are. It is concerned with the nature of leader's behavior and with their moral orientation. In any decision making situation, ethical issues are either implicitly or explicitly involved. The choices leaders make and how they respond in a given circumstance are informed and directed by their ethics.

An example is that in the late 1990s, the president of the United States, Bill Clinton, was brought before congress for misrepresenting under oath an affair he had maintained with a

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White House intern. For his actions, he was impeached by the US House of Representatives, but then was acquitted by the US Senate. At one point during the long ordeal, the president appeared on national television and, in what is now a famous speech, declared his innocence. Because subsequent hearing provided information that suggested that he may have lied during his television speech, many Americans felt President Clinton had violated his duty and responsibility (as a person, leader and president) to tell the truth. From a deontological perspective, it could be said that he failed this ethical responsibility to do the right thing – to tell the truth.

Many researchers have proposed ethics theories to define it; they can be classified into two domains broadly – theories about leader's conduct and theories about leader's character. Also, many people have defined some principles of ethics:

1. Ethical leaders respect others
2. Ethical leaders serve others
3. Ethical leaders are just
4. Ethical leaders are honest
5. Ethical leaders build community

Beauchamp and Bowie (1988) outline several of the common principles that serve as guides for leaders in distributing the benefits and burdens fairly in an organization. These are the Principles of Distributive Justice: To each person

- An equal share or opportunity
- According to individual need
- According to that person's rights
- According to individual effort
- According to societal contribution
- According to merit or performance

Although not inclusive, these principles point to the reasoning behind why leaders choose to distribute things as they do in organizations. In a given situation, a leader may use a single principle or a combination of several principles or a combination of several principles in treating subordinates.

As Burns (1978) wrote, transformational leaders and followers begin to reach out to wider social collectivities and seek to establish higher and broader moral purposes. All of our individual and group goals are bound up in the common good and public interest. We need to pay attention to how the changes proposed by a leader and followers will affect the larger organization, the community and the society. An ethical leader is concerned with the common good, the broadest sense.

Leadership –Trait Approach: Trait approach was one of the first systematic attempts to study leadership. In the early 20th century, leadership traits were studied to determine what made certain people great leaders. The theories that were developed were called –great man theories because they focused on identifying the innate qualities and characteristics possessed by great social, political and military leaders. This approach began with an emphasis on identifying the qualities of great persons, shifted to include the impact of

situations on leadership, and, currently has shifted back to reemphasize the critical role of traits in effective leadership.

Some of the traits which are central to the trait approach are – Intelligence, Integrity, Self-confidence, Sociability and determination. Out of the big 5 personality factors (neuroticism, extraversion, openness, agreeableness and conscientiousness), extraversion is the factor which is most strongly associated with leadership.

Another way of assessing the impact of traits on leadership is through the concept of emotional intelligence, which emerged in the 1990s as an important area of study in psychology. The underlying premise suggested by this framework is that people who are more sensitive to their emotions on others will be leaders that are more effective.

Ethical Orientation: Based on past research, three factors that drive ethical orientation are – necessity, belief and tolerance.

- a) Necessity of unethical acts – The need or necessity to compromise one's ethics is likely a function of the pressure to meet certain objectives. Researchers such as Trevino (1986), Jones (1991), and Beets (2005) focus upon the rationale behind the actions (e.g., uncertainty, closeness to the business environment, and empathy). But there is no concrete research to verify that the perceived necessity for an unethical act is the same for different leaders or if differences in perceived necessity exist across effectiveness of leaders.
- b) The belief that anything that is legal is ethical – An ongoing debate exists about the relationship between law and ethics. The post-Enron era has seen a considerable emphasis upon external regulation. Most notably, the Sarbanes-Oxley Act (SOX) of United States Congress and Indian laws on corporate accountability (for example - signing by board of directors on financial statements) are attempts to incorporate more responsiveness of business leaders towards corporate misconduct. Does it mean that these legal parameters are ethical? (Beggs and Dean 2007). Regardless of the rationale behind the response, there is not one set of laws to govern worldwide business behavior. Thus, if leaders equate laws with ethics, then there could be a variety of ethical behaviors largely dependent upon the laws.
- c) The tolerance of unethical acts – As per the past research unethical acts of the business leaders are often committed to meet organizational goals. Does it mean that organizations are developing culture of allowing unethical aberrations? This leads to a possible inference that organizations have higher tolerance towards unethical acts when the corporate gain is at sight.

Usually, moral dimensions of leadership behavior are played an indirect role in the decisions taken by them. In the initial researches, it has been stated that ethical leadership involves promoting normatively appropriate conduct through role modeling and interpersonal relationships (Brown et al. 2005). Next, research on authentic leadership asserts that moral authenticity is achieved when individuals act in accordance with their internal thoughts and feelings (e.g., Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Harter, 2002). Authentic leader is also defined as someone who transparently presents one's self, demonstrating self-awareness, moral self-regulation and balanced information processing. Here, in this paper we try to link leadership effectiveness with its ethical orientation, particularly in organizational environment.

There are few among the 20th century leaders who can measure up to the standards set by Mohandas Karamchand Gandhi in the practice of ethical leadership. He not only won independence for India but ultimately brought down the British Empire without firing a bullet, which in itself was a remarkable achievement that could only be done with ethics, morals and a transparent sincerity in leadership. Through his example he gave the world an alternative to violent conflict resolution – a comprehensive philosophy of nonviolence – the practice of which requires high moral standards.

Values are beliefs inherent in the minds of the business leaders based on their culture, environment and educational learning. These values become a facilitating ground for reasoning to decide about ethical conduct of a person. These values differ with the geographical locations which further raised questions about ethical orientation of business leaders at different regions of world. It definitely gives way to different ethical conduct at different parts of world. Or it indicates that there is much more to evaluate before we narrow upon the factors affecting ethical conduct of leaders.

(In)Consistency across Situations & Times: Foundation of ethics may lie on consistency of ethical conduct across different situations and time which means that ethical leader tends to act on same way repeatedly. The more a leader maintains a similar ethical stance over time and situations, and the more predictable and transparent his or her behavior, the more likely observers will come to characterize the leader as credible, trustworthy, possessing integrity – as authentic (Gardner et al., 2005). A leaders' effectiveness can be gauged with the reliability and predictability of his behavior.

Ethical stand in adversities: Whether a leader will act on their values is often influenced by their courage to take an ethically correct stand. Most often, lots of things are at stake and there is no material gain on taking ethical stand. A leader is often left with a conscious self and the well accepted and unethical conduct of the business environment. Other side looks more lucrative with the acceptance and rewards associated with it. It is mostly a conscious self that drives actions of leaders. The results revealed that people strongly committed to the value of honesty were more likely to sacrifice (real) money in favor of behaving honestly. Hence, leaders are likely to differ in their commitment and courage to act upon their ethical values.

Overall, we define ethical leadership as involving (Carmen Tanner and all, 2010)

- (a) ethical awareness and adherence to morally upright values,
- (b) the ability to act in accordance with those values over varying settings, and doing so
- (c) despite the risk of unpleasant consequences.

To summarize this section, we looked into different factors of ethical conduct and impact of externalities on these factors for a leader. With lots of complexity in environment and high stakes, line between ethical and unethical conduct is getting more thin and blurred. On other hand, responsibility on business leaders to remain ethical is increasing with each passing year.

Research Methodology

Hypotheses

Null Hypothesis

H0: Ethical conduct is independent of the leadership effectiveness.

Alternate hypothesis

H1: Ethical conduct is dependent on the leadership effectiveness.

Sample: A sample size comprising about 45-50 respondents was taken for our survey. These respondents were from the organisational work-experience background. They were asked to rate one particular leader under whom they had worked in any organisation, along the dimensions of both Ethical orientation and Leadership Traits (Based on the Trait approach to leadership).

Scales used: Two separate scales on leadership traits and ethical orientations were used as given in Exhibit I & II.

Scoring

(a) Leadership Trait Questionnaire

This questionnaire measures personal characteristics of leadership. The responses are measured on a 5-point Likert scale. The average of all ratings is computed across the 14 items which measure the traits as perceived by the respondents, of their leaders. These scores imply how others see their leaders and are a measure of the overall apparent effectiveness of the respondent's leaders.

(b) Ethical Orientation

Next, the survey participants are asked to fill up the Perceived Leader Integrity Scale (PLIS) in order to determine the perceived ethical orientation of the same Leader, whose effectiveness they have already judged above. The PLIS indicates the degree to which the participants view their leader's behaviour as ethical.

The responses are summed along all the 30 items. The ranges are as follows :

30-32 (Highly Ethical) : The impression is that the person is very trustworthy and ethical.

33-45 (Moderate Ethical) : The impression is that the person might engage in some unethical conditions under certain conditions.

46-120 (Low Ethical) : The impression is that the person does things that are dishonest, unfair and unethical whenever there is an opportunity for unprincipled behaviour.

Analysis

The correlation coefficient between Ethical orientation and Leadership Effectiveness trait is -0.936. It is a highly negative correlation and proves that the higher the leadership trait, the lower is the perceived ethical orientation of the leader. This is exemplified by the Satyam example where the leadership orientation was very high but low to low business ethics, a major fiasco was caused. The key to India-based Satyam Computer Services' success had been a cutting-edge leadership model "designed to break down the barriers of hierarchy, empower people, and distribute leadership," according to a company executive. This model caused Satyam to grow but due to wrong ethical practices of the leader, Satyam fiasco happened.

Conclusion

The research findings indicate a strong negative correlation between ethical orientation and leadership effectiveness as measured in the trait approach. While this comes as a surprise to several thinkers and leadership theorists, even proving contradictory to age-old wisdom of strong ethics being a hallmark of an effective leader, the findings, are in some sense, a reflection of modern values and perceptions. It must be remembered that the recent past is replete with examples of leaders being perceived as 'effective' by their subordinates, the media, shareholders and various other stakeholders, in spite of having a chequered background when it came to their perceived ethical orientation. Some examples include the Enron, Consulting major- Arthur Andersen, and various politicians perceived as 'dynamic'. A major factor in this is the perception of the public of the word leadership.

Further in the Indian context, this is exemplified by the Satyam example where the leadership orientation was very high but low to low business ethics, a major fiasco was caused. The key to India-based Satyam Computer Services' success had been a cutting-edge leadership model "designed to break down the barriers of hierarchy, empower people, and distribute leadership," according to a company executive. This model caused Satyam to grow but due to wrong ethical practices of the leader, Satyam fiasco happened. Popular perception of leadership is derived from a results based approach, the results being primarily centred in the materialistic domain-financial measures, market share measures and so forth. The findings suggest a more thorough examination of the leadership effectiveness measures, and need a sustained examination over a long term, to determine the long term impact of ethics on the leadership traits of individuals.

Limitations

- The primary limitation is the measurement of Leadership effectiveness according to the trait theory. The trait approach does not provide an exhaustive list of leadership qualities. Situational impact is not considered in this approach. Further there is not much of substantial research evidence to back-up the traits already considered, which may be viewed as subjective by many researchers in the field.
- The sample taken does not involve evaluation of the same leader by multiple persons and hence has the constraint of attribution error and personal biases.
- The PLIS questionnaire used to measure the ethical orientation of leaders derives its origins from the Leadership Ethics Theories. These theories are mainly anecdotal in nature and do not have the empirical backing of research to substantiate for their existence and relation to leadership ethics.

Scope for further research

The various other theories of leadership, namely the situational approach, path goal approach, leadership exchange and so forth need to be applied for a comprehensive assessment of the leadership effectiveness. Moreover, the same assessment can be carried out over the same leaders by a larger sample respondent pool, at various points in time. This is required for the robustness and efficacy of the correlation assessment.

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Exhibit I: Leadership Traits Scale

- Is articulate
- Is perceptive
- Is self-confident
- Is self-assured
- Is persistent
- Is determined
- Is trustworthy
- Is dependable
- Is friendly
- Is outgoing
- Is conscientious
- Is diligent
- is sensitive
- is empathic

Exhibit II: Ethical Orientation Scale

- Puts his or her personal interests ahead of the organization
- Would risk other people to protect himself or herself in work matters
- Enjoys turning down requests
- Deliberately fuels conflict between other people
- Would blackmail an employee if she or he thought she or he could get away with it
- Would deliberately exaggerate people's mistakes to make them look bad to others
- Would treat some people better if they were of the other sex or belonged to a different ethnic group
- Ridicules people for their mistakes
- Cannot be trusted with confidential information
- Would lie to me
- Is evil
- Is not interested in tasks that do not bring personal glory or recognition
- Would do things that violate organizational policy and then expect others to cover for him or her
- Would allow someone else to be blamed for his or her mistake
- Would deliberately avoid responding to email, telephone or other messages to cause problems for someone else
- Would make trouble for someone who got on his or her bad side
- Would engage in sabotage against the organization
- Would deliberately distort what other people say
- Is a hypocrite
- Is vindictive
- Would try to take credit for other people's ideas
- Likes to bend the rules
- Would withhold information or constructive feedback because he or she wants someone to fail
- Would spread rumors or gossip to try to hurt people or the organization
- Is rude or uncivil to co-workers
- Would try to hurt someone's career because of a grudge
- Shows unfair favoritism towards some people
- Would steal from the organization
- Would falsify records if it would help his or her work situation
- Does not have high moral standards

Exhibit III: Some sample data points

Ethical Orientation Scores	Ethical Orientation Interpretation	Leadership Effectiveness Trait Approach scores
38	Moderately Ethical	4.5
75	Low Ethical	3.2
114	Low Ethical	2.4
60	Low Ethical	3.8
38	Moderately Ethical	4.4
57	Low Ethical	3.5
31	Highly Ethical	4.1
45	Moderately Ethical	3.8
31	Highly Ethical	5
42	Moderately Ethical	4.2
33	Moderately Ethical	4.4
61	Low Ethical	3.7
40	Moderately Ethical	4.4
50	Low Ethical	4.2
76	Low Ethical	3
67	Low Ethical	3.5
32	Highly Ethical	4.7

Managing Wiser Workforce

Kuldeep Kaur & Kiran Verma^{*}

Abstract

Individuals over the age of 55 years represent progressively a large proportion of the global workforce. For more than a few decades many companies have strong and persistent tendency to virtually force these older employees out of the workforce or to bribe them heavily into taking early retirement. Older workers enrich the workforce in ways which employers of today's world often dismiss in preference to quantifiable skills and updated certificates. Workers with mature judgment, long tenure and a unique combination of skills are more difficult to replace and replicate than young workforce. In addition their education, knowledge, loyalty, dedication and commitment to doing quality work are invaluable. Approaches to organizational change with multigenerational workers and work teams, performance appraisal and age-neutral policies are likely to help in managing the huge knowledge base. This paper builds a case for organizational cultures conducive for the older workers

Introduction

We all are going to share the fact that we are getting older, but this age differs from one person to other. While two people may share the same birth date, one may function better physically or mentally. We describe these two people as having the same chronological age but different functional age. As the definition of age, it is also difficult to define 'older worker'. The World Health organization uses the age of 45 as dividing line between young and old worker. Large number of the current workforce consists of Baby Boomers moving into their fifties and sixties. They will continue to constitute a large segment of the workforce for some time. With the imminent retirement of large numbers of Baby Boomers being forecast, many organizations are focusing their recruiting and retention efforts on Generation X and Generation Y.

The companies need to learn how to manage older workers better. It also means that they will be confronted with a wave of retirements as the baby-boomers leave work in droves. Most companies are remarkably ill-prepared. Companies are still stuck with an antiquated model for dealing with ageing, which assumes that people should get pay rises and promotions on the basis of age and then disappear when they reach retirement. They have dealt with the burdens of this model by periodically -downsizing|| older workers or encouraging them to take early retirement. This has created a dual labour market for older workers, of cosseted insiders on the one hand and unemployed or retired outsiders on the other.

Companies have no choice but to face the difficult problem of managing older workers. Supply of Generation X and Generation Y employees simply isn't going to be large enough to fill all the jobs. But the meaning and purpose of work for older workers differs from that for members of other generations. They require different motivation and retention strategies.

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Workplace traits most attributed to generations

Veterans (World War II generation; born before 1945)

- Plan to stay with the organization over the long term
- Respectful of organizational hierarchy
- Like structure
- Accepting of authority figures in the workplace
- Give maximum effort

Baby Boomers (Born 1945-1964)

- Give maximum effort
- Accepting of authority figures in the workplace
- Results driven
- Plan to stay with the organization over the long term
- Retain what they learn

GenXers (Born 1965-1980)

- Technologically savvy
- Like informality
- Learn quickly
- Seek work/life balance
- Embrace diversity

Nexters (Born 1980-2000)

- Technologically savvy
- Like informality
- Embrace diversity
- Learn quickly
- Need supervision

Managing older workers sometimes awkward for Generation X, Y bosses

Older workers of any age above 45 can be victims of outdated attitudes, stereotyping, unfair policies and prejudices. They can negatively affect older workers by

1. prematurely forcing them out of the workforce
2. denying them promotions
3. excluding them from learning and training opportunities.

Sometime it becomes difficult for young managers to give orders to their subordinates of their parent's age. While the generation gap isn't usually a cause for concern, employers are beginning to pay more attention to problems that may arise between baby boomers, Generation X and Next-gen managers. What a baby boomer considers professional behavior may be different for a Generation X or Y person. Some older workers, for example, believe that it's essential to put in extra hours at the office.

Young people often notice tension during their transition into the management role and the older person wants their younger bosses to prove themselves as capable of being their boss. A lot of the new kids who come into construction don't have the attributes of the baby boomers: the

desire to work hard and to take pride in doing quality work for older people, construction is a career; for the younger ones, it's often just a paycheck.

Myths and Realities about Old Age Workers

MYTHS AND REALITIES ABOUT OLD AGE WORKERS	
MYTHS	REALITY
Older workers are more likely to have work related injuries.	Not true. In fact older workers suffer fewer job related injuries.
Older adults are unable or unwilling to learn new things or skills.	Age does not determine curiosity or willingness to learn.
Older adults avoid new approaches or new technologies.	Older workers are likely to respond well to innovation if it is: <ul style="list-style-type: none">• Relate to what they already know.• Allow for self-paced learning.• Provide opportunities for practice and support.
It is not worthwhile investing in training old age workers because they are just coasting to retirement.	Older workers tend to be loyal and less likely to change job frequently.
Older workers relate poorly to customers.	They are more effective where people skills are required.
Older workers cost more than younger ones and are less productive on the job.	Older workers have less absenteeism, less turnover, superior interpersonal skills

Employers' Attitudes toward Older Workers

Employers' first impressions of older workers are often based on stereotypes - "mental pictures of people based on their membership in a group. Although research suggests positive attitudes toward older workers on certain dimensions (knowledge, experience, honesty, dependability, work ethic, mentoring, and stability); they are perceived negatively in many other areas. For example, studies indicate that employers believe older workers are less flexible, in poorer health, less creative, less interested in technological change, and less trainable than are younger workers. In addition, older workers are seen as being more prone to accidents and staying with the company for a shorter period of time as compared with younger workers. Older workers are also viewed by employers as less productive and less able to engage in physically demanding work than younger worker.

Although most of these stereotypes have been disproved in the literature, employers continue to believe many of them and often make their hiring decisions accordingly. The key reasons that employers cite for not hiring older workers relate to beliefs concerning their lack of computer literacy, followed by lack of other appropriate skills, lack of appropriate qualifications, and difficulty adapting to varying work settings. Employers' stereotypical attitudes have also been linked to poor opportunities for training, promotion, and retention of older workers. Another study that specifically examined the relationship between employers' attitudes and their

behaviors toward older workers also found a direct association between the two in relation to hiring, training, and advancement opportunities. In fact, employers who have less personal contact with older workers have more negative attitudes toward them than employers who have more personal contact with older workers. This could suggest that although employers may be positive toward older workers already employed by their organization, they are negative toward the recruitment of new older employees.

Managing Age Discrimination

AGE and experience have always been revered in oriental societies like India. This was true not just in the social context but also in the corporate sector. In most companies, more so among public sector units, age had a direct correlation with seniority in the organization. But that's changing fast as globalization and technology are changing the rules of the game. With a heavy thrust on performance, experience no longer carries the premium it once used to. Fresh thinking and ability to adapt and learn on the job are becoming very important. Not surprisingly, many seasoned executives find themselves overtaken by relatively young fresh graduates.

This shift of power generates heat and friction at the workplace. The experienced lot isn't exactly thrilled at taking instructions from someone much younger. The younger lot, brimming with new ideas and raring to go, often feels bogged down by the friction that age experience dynamics generate at the workplace. The conflict arises usually because of a clash in mindsets. The older lot tends to view the younger bosses as a bunch of inexperienced, impulsive upstarts with little regard for age or wisdom. The younger ones, on their part, tend to think of the former as outdated, low on ambition and resistant to fresh ideas.

Here's the guide to managing heat and friction at the workplace between younger and older executives.

1. *Be sensitive:* With so much age gap, there's an obvious difference in attitude, mindset and approach to work and life. This is particularly true for the younger need to keep in mind the fact that it's far more difficult for the older lot to change than the younger ones. A little patience and some sensitivity while communicating with them can go a long way. Making the older lot feel important and their experience invaluable to the organization is important.
2. *Be flexible:* Stereotypes are meant to be broken. Not every young boss is aggressive, brash and opinionated. Just like not every older employee is closed-minded and condescending. A little respect for the older lot can go a long way in establishing rapport with the older lot. Understanding each other as colleagues, not necessarily as boss-subordinate, helps a lot.
3. *Avoid needless clash:* For the older crowd, it's important to steer clear of constantly harping about the 'good old days.' Drop the condescending attitude and stop equating younger years with less capability. A little respect and appreciation of their contribution might go a long way in winning their confidence.
4. *Give & take:* Respect others for what they bring to the table. The older lot has the benefit of experience and consistency, while the younger ones have the creativity, ideas and a better understanding of coping with today's fast-paced business environment. Both sets

have a lot to learn from each other, so keep the channels of communication open. *Common goal:* Ultimately, both of you are working for the greater good of the organization. Keeping that big vision in mind, despite conflicts, will help focus energies more constructively.

5. *ICE AGE:* In a world biased towards performance than experience, avoiding friction born out of generation gap calls for tact and sensitivity

Current Practices Worldwide

- Bosch asks all retirees to sit down for a formal interview in an attempt to –capture their wisdom for younger workers.
- Sweden's Elmhults Konstruktions and the Netherlands' Hazenberg Bouw have introduced mentoring systems that encourage prospective retirees to train their replacements.
- BMW decided to staff one of its production lines with workers of an age likely to be typical at the firm in 2017. At first –the pensioners' line was less productive. But the firm brought it up to the level of the rest of the factory by introducing 70 relatively small changes, such as new chairs, comfier shoes, magnifying lenses and adjustable tables.
- Mandatory retirement was eliminated in Ontario in 2006, and thus, increasing attention has been paid to the aging of the workforce by both lay people and academics.
- A large UK local authority (London Borough of Hounslow) has banned age bars from its recruitment advertisements.
- IBM-Sernet in Italy was established in 1991 as a partnership between a group of IBM managers and IBM itself. It offers consultancy services to companies of all sizes and in every sector. The initiative was a contracting out one designed to retain a group of highly skilled professionals within the ambit of IBM.
- The Higher Training Institute in Italy is a non-profitmaking organisation which operates a training programme for unemployed people, most of whom are over 50. This initiative is focused on one of the most deprived regions of Italy and involves one of its biggest trade unions.
- A large aluminum manufacturing company in Greece (Hellas Can) encourages older workers to participate in all its training programmes, including training in the use of information technology. Older workers themselves are frequently involved in providing on-the-job training.
- A medium-sized Belgian finance company (Fidisco NV) enables its employees to adopt very flexible working patterns. It allows older staff (men over 60 and women over 55) to work two hours per week less without loss of earnings. It is possible to convert this reduction in working hours into extra holidays.
- A large family food production company in Finland (Ruoka-Saariöinen Oy), in collaboration with public and private insurance institutions, has invested in a project aimed at adding one or two years to an employee's working life with the company. The physical working environment has been improved, for example by the purchase of new working equipment. Ergonomic improvements have enabled better working postures. The workers have personal pause exercises and fitness programmes, and losing weight has

become popular. The project has had a highly beneficial impact on both physical and mental working capacity.

- A major Swedish car manufacturer (Volvo Penta) has responded to the ageing of its workforce by introducing a programme to change the attitudes of its employees towards internal mobility. The initiative includes the allocation of money to individuals for personal development programmes.

Key guidelines to manage silver tsunami

Backing from senior management: Without this support an initiative is not likely to proceed very far. Typically it is the HR head in the organization concerned that takes on a crucial role in championing the cause of good practice. There are a variety of reasons why senior management will support a good practice initiative in age management: a recognition of the implications of the ageing of the workforce and the need to retain and retrain older workers; bottlenecks in the local labour market; a change of management resulting in a new approach or policy; or the availability of public funding for particular types of initiative. Obviously a bid to secure support for a good practice initiative will have to emphasize the specific needs of the organization as well as the general points set out in the previous section.

A supportive HR environment: It is not necessary to have an HR policy which is overtly older worker friendly in advance of the introduction of a good practice initiative. However, such initiatives are likely to succeed best within an environment that values human resources. Signals of the sort of environment that is likely to be conducive to good practice include a commitment to training and an organizational philosophy emphasizing quality. There are two separate traditions underlying good HR practice. On the one hand there are personal, sometimes paternalistic, approaches found in some companies while, on the other, there are modern management strategies emphasizing design, quality, cooperation and the value of human resources. Good practice in age management can thrive under both traditions.

A supportive HR environment: It implies that blockages are not created by line managers or other staff with responsibility for implementing initiatives.

Commitment from the ageing workers involved: Although the most common method of introducing good practice in age management is a top-down management decision, there is no doubt that the support of those involved, particularly of the older workers, is crucial to the success of such initiatives. Such commitment is not necessarily forthcoming initially, especially in a climate where early retirement has been expected, and it may be necessary to go to considerable lengths to persuade older workers to accept and 'own' an initiative. This can involve, for example, special seminars in order to get feedback from those involved. Where appropriate, trade union representatives may be an essential source of support.

Changing Expectations: Another way that participants attempted to counteract employers' ageist stereotypes was in relation to their work related expectations. Most respondents (men and women equally) changed their employment expectations with respect to altering their original employment goals, the type of employment being sought, or the geographical location of the

place of employment. First, a third of participants indicated that they altered their original employment goals. Second, a majority of participants changed the type of employment they were seeking (i.e., monetary remuneration, career change, employment status). Finally, one third of respondents also considered geographical relocation to secure employment. Although these mental strategies may be applicable to all individuals regardless of age, older workers have had to use these management techniques to heightened degrees due to the experience and higher salaries that are often associated with advancing age. Thus, once older workers perceived that their age was a barrier to reemployment, they soon realized that they could no longer have the same expectations they once had if their main goal was to secure employment.

Be Careful of Age Bias: Organizations should review their policies for signs of age bias and take appropriate action. These signs can often be subtle. Offering early retirement incentives, for example, could be regarded as ageism. Aside from policies, organizations need to be careful in the wording of job announcements, recruitment fliers or even when conducting normal business meetings that in their zeal to attract and accommodate Generation X and Y that they do not state or imply that older workers are not valued or important. This is a litigious time. Limit your risk and don't put up any red flags

Modern Ideas for Managing the Aging Workforce

Training: The best practice in managing the aging workforce is to ensure that older workers do not remain neglected in training and career development, and that such employees receive training and development related to their needs and requirements. Young employees have a career ahead of them, and prefer to learn new and unrelated generic skills that might benefit them at a later stage. Older employees who have already come a long way would rather acquire training specific to job in question, and in new technology skills such as Information technology skills, taken for granted by young employees but unfamiliar to older employees. Older employees would also prefer refresher courses that help them revive the subjects and experiences they learned and applied long ago, and update themselves.

Flexibility: Managing older employees may require incorporating flexibility to the company's schedules and policies. Workplace flexibility such as flextime, telecommuting, and other interventions suit elder people well, and might actually play a big role in retaining them. Older workers prefer spending a large chunk of time in creative pursuits, or in family affairs rather than working full time with overtime to make it big. Some companies allow older staff to work a few hours less per week without any reduction in wages, or accumulate such reduced hours into an extra holiday.

Performance Measurement: The general approach toward performance management and performance appraisals are to judge a candidate based on the drive to excel, willingness to learn new things, ability to take the initiative, and the extent of commitment and dedication put into the job. Such traits remain very irrelevant for the older workers, who primarily seek stability and a settled job routine. Some older workers even prefer a lighter working schedule with less responsibility compared to others, and remain willing to satisfy themselves with relatively lesser pay and benefits.

The best approach in managing the aging workforce is to understand such differences in older worker preferences, identify what motivates them, and incorporate the same in job design, benefits package, and performance appraisals.

One best practice is to allow older employees discretion in their work schedule, allowing them to choose their preferred range and extent of job duties, and design the compensation package appropriately.

Ergonomics: One critical aspect in managing the aging workforce is job design and ergonomic conditions. Young employees with job vigor can get away with a poorly designed job spaces or job settings largely before fatigue and other ills start creeping in. In older employees, such problems start appearing instantly. Apart from taking extra precaution to ensure adequate ergonomics in the workplace, some considerations include:

- Elimination of heavy lifting or large twisting movements
- Providing additional lighting to compensate for poor eyesight
- Making additional provision for seating, and redesigning the workstation accordingly to retain productivity levels
- Alteration in job design and work floor layout to avoid arduous bending and reaching.

Healthcare: Another key element in managing the aging workforce pertains to health care. Older employees are more prone to illness, diseases, and health breakdowns. Incorporation of regular health checkups and establishing a fitness regimen, ensuring greater health coverage in employee benefits, and allowing sufficient time during work for medication and special dietary requirements are good practices in this regard. Managing the aging workforce properly can lead to untold benefits for the organization such as accessing reliable and matured employees, and their rich repository of life experiences. The underlying factor on which success depends, however, is the commitment of key personnel in an organization, including both the top management and line management

Use Older Employees as Mentors or Ambassadors

Employees who are at midlife or beyond and who have been with the organization for many years possess vast knowledge of the organization and its business. They know the technical aspects of the business inside and out, and they also know the history, precedent, practices and unwritten rules from their long experience. Although these employees could often best serve the organization by helping to develop other employees at all levels and ages, both professionally and personally, they are often not used in that way, and this knowledge remains untapped or not used very effectively. This results from the hierarchical and bureaucratic structure of most modern organizations (even in the private sector) which forces individuals to move up or out.

To make effective use of this untapped knowledge, organizations need to shift some of these older workers from a power role in the hierarchy to one of consultation, wisdom and guidance. This actually fits in with the psychological shift to a communion orientation that midlife workers are going through. They are psychologically ready for this type of change at this stage of their careers. Research shows that given the appropriate circumstances and opportunity, individuals in

an organization are able and willing to have their power role diminished and changed to a focus on guiding and serving others.

Actions at Different Level

Employers: Employers, public and private, should aim to create the conditions in which employees can manage their own careers and ageing. They have to recognize the implications of an ageing workforce. Many examples demonstrate that large, medium-sized and small organizations can develop initiatives to overcome age barriers.

Actions: develop age awareness throughout the organization and ensure that age is not used inappropriately in recruitment and training.

Ageing workers: If a primary duty of employers is to create the conditions in which individuals can manage their own careers and ageing, then ageing workers have a parallel duty to take advantage of that opportunity.

Actions: take advantage of training and lifelong learning opportunities and take stock regularly of their own training and career development requirements.

Trade unions: Whether to defend the current interests of members (as workers) or to promote their future interests in retirement is sometimes portrayed as a dilemma facing trade unions. However, enlightened trade unions will not see it as such and will focus on the promotion of equal opportunities for all age groups and on ensuring that, on retirement, older workers have adequate pensions.

Actions: union representatives should take part in age-awareness training as a matter of routine, and in collective agreements include training measures that rectify the disadvantages experienced by older workers.

National Employer and trade union organizations: Disseminate examples of good practice to their members as part of promoting positive approaches/attitudes to age management.

Governments: National governments occupy three crucial roles with regard to combating age barriers: they may directly finance or subsidize initiatives; regulate the labour market or society in general, to oppose age barriers; and/or provide encouragement to employers.

Governments should lead by example as employers, contractors, legislators and rule makers.

Actions: Education: public education to counteract negative images of older workers and the promotion of lifelong learning.

Employment policy: active labour market policies designed to enable older workers to remain in or return to employment, and the promotion of quality employment for this and other age groups.

Pensions and social security policies: elimination of incentives to employers to make older workers redundant.

Inclusion of older workers: encourage employers to establish comprehensive action programmes on age and employment by publishing good practice guides and disseminating age awareness literature.

Conclusion

The work force is aging as baby boomer move toward retirement. Gen X managers need to learn how to motivate and manage this talent pool of older workers. Both generations have very different views of the other and will need to learn how the other generation operates. It is up to the managers, Gen X or otherwise, to take the lead and create the climate in which older workers will remain engaged and productive. Key guidelines to manage the wiser workforce include backing from senior management, a supportive HR environment, commitment from the ageing workers involved, careful and flexible implementation of the policies for the aged, eliminating age bias. Companies will have to do more than this if they are to survive the silver tsunami. They will have to rethink the traditional model of the career. This will mean breaking the time-honored link between age and pay – a link which ensures that workers get ever more expensive even as their faculties decline. It will also mean treating retirement as a phased process rather than a sudden event marked by a sentimental speech and a carriage clock.

Age discrimination legislation has the potential to impact all areas of human resource management. It is difficult not to conclude that in the past older workers have rarely been explicitly managed as a group in terms of recruitment, retention, career planning or exit. The current ad hoc approach to these issues will be open to challenge under age discrimination legislation if individuals can argue that age rather than performance was a deciding factor in a decision. At present normal retirement ages are a convenient mechanism for –refreshing the workforce and can in any case be ignored if the organization so wishes. Even with a normal retirement age of 65, organizations will have to start thinking more deliberately about how they manage older workers and behaving more creatively and strategically about how their employees' careers are managed. Some organizations have begun to go down this path, but many more are yet to confront the realities that age discrimination legislation is likely to bring.

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Evolution of Human Resource Management

G Vani*

Abstract

HRM has evolved from a number of different strands of thought and is best described as a loose philosophy of people management rather than a focused methodology. It derives largely from the 20th century but incorporates older notions about the management of people at work. The contributions made by great pioneers and researchers are been successfully followed and implemented in the organizations which was in favor of employees. Employees were been given identity, their opinions were considered in various issues and the managerial styles towards employees were been changed. Current practices in many organizations indicate that employees are viewed as valuable investments. The basic premise of the academic theory of HRM is that humans are not machines; therefore we need to have an interdisciplinary examination of people in the workplace. In this paper, the author has examined the evolution of Human Resource Management and reviewed some of the contemporary people management practices.

Keywords: Human Resource Management, Evolution, Contemporary Practices

Introduction

Human Resource is the assets of the organization. The employees were considered as machines and animals in the past decades. Employees were made to work in the organization without any stipulated time, schedule, workload, compensation, working hours etc. They were made to stay for long hours for which they were even not paid properly. Due to the low literacy rate of Indians in the past decades especially at the times of foreign rule employees use to commit mistakes in ignorance for which they were punished and sometimes fired from the organization. The turnover of employees took place which resulted in replacement problem.

The rapid growth in the number of factories and the need to coordinate the efforts of large number of people in the work place necessitated the development of management theories and principles. In order to overcome the scarcity and replacement of employees management has approached many theorists and practitioners who contributed valuable ideas that laid the foundation for broader inquiries into the nature of management.

Human resource management (HRM) is the strategic and coherent approach to the management of an organization's most valued assets - the people working there who individually and collectively contribute to the achievement of the objectives of the business. The terms "human resource management" and "human resources" (HR) have largely replaced the term "personnel management" as a description of the processes involved in managing people in organizations. In

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simple words, HRM means employing people, developing their capacities, utilizing, maintaining and compensating their services in tune with the job and organizational requirement.

HRM has become the dominant approach to people management in English-speaking countries. But it is important to stress that HRM has not 'come out of nowhere'. There is a long history of attempts to achieve an understanding of human behavior in the workplace. Throughout the 20th century and earlier, practitioners and academics developed theories and practices to explain and influence human behavior at work. HRM has absorbed ideas and techniques from a wide range of these theories and practical tools. In effect, HRM is a synthesis of themes and concepts drawn from a long history of work, more recent management theories and social science research.

Evolution of Management Thoughts towards Employees in the Organization

Great pioneers, researchers and practitioners have contributed their valuable suggestions to the organization towards the treating the employees. Research in the area of HRM has much to contribute to the organizational practice of HRM. For the last centuries and decades, empirical work has paid particular attention to the link between the practice of HRM and organizational performance, evident in improved employee commitment, lower levels of absenteeism and turnover, higher levels of skills and therefore higher productivity, enhanced quality and efficiency. Best fit, or the contingency approach to HRM, argues that HRM improves performance where there is a close vertical fit between the HRM practices and the company's strategy. This link ensures close coherence between the HR people processes and policies and the external market or business strategy.

1. **Robert Owen** pioneer of human resource management (1771-1858) was a successful British entrepreneur in the early 19th century. He was one of the earliest management thinkers to realize the significance of human resource. He believed that workers' performance was influenced by the environment in which they worked. He proposed legislative reform that would limit the number of working hours and restricted the use of child labor. Owen recommended the use of a 'silent monitor' to openly rate an employee's work on a daily basis. He tried to improve the living conditions of his employees by ensuring basic amenities like better streets, houses, sanitation and setting up an educational establishment. He argued that a manager's best investment was in his workers.
2. **Charles Babbage** British professor of Mathematics (1792-1871) widely known as the 'Father of modern computing'. Babbage advocated the concept of 'division of labor' he was impressed by the idea of 'work specialization', or the degree to which work is divided into various tasks. He even suggested employees should be trained in one specific skill and made responsible only for that part of the operation. He even devised a profit-sharing plan under which bonuses were given for useful suggestions contributed by employees and wages were based on the profits generated by the factory.
3. **Andrew Ure and Charles Dupin** were management education pioneers (1778-1857) and Charles Dupin (1784-1873) and early proponents of the study of management. Ure

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published the philosophy of Manufacturing, in which he explained the various principles and concepts of Manufacturing.

4. **Henry Robinson Towne** (1844-1924) emphasized the need to consider management as a separate field of study and the importance of business skills for running a business.
5. **Fredric Winslow Taylor** (1856-1915) –Father of Scientific Management|| suggested using scientific methods to determine how a task should be done instead of depending on the previous experiences of the concerned worker. Taylor emphasizes on training the employees to perform a particular job. Established harmonious relations between management and workers so that the job is performed in the desired way. The major two managerial practices emerged were 1. Piece-rate incentive system. Under this system, a worker who met the established standards of performance would earn the basic wage rate set by management. If the worker's output exceeded the set target, his wages would increase proportionately which would motivate worker to produce more and thus help the organization perform better. 2. Time-and-motion study: In –Time-and-motion|| study, jobs are broken down into various small tasks or motions and unnecessary motions are removed to find out the best way of doing a job. The objective of a time-and-motion analysis is to ascertain a simpler, easier and better way of performing a work or job.
6. **Frank and Lillian Gilbreth** (1868-1924) are considered as the –father of Motion Study||. Motion study involves finding out the best sequences and minimum number of motions needed to complete a task.
7. **Henry Laurence Gantt** (1861-1919) has made several contributions to the field of management. He is best remembered for his work on the task-and-bonus system and the Gantt chart. Under Gantt's incentive plan, if the worker completed the work fast i.e in less than the standard time, he received a bonus. He also introduced an incentive plan for foremen, who would be paid a bonus for every worker who reached the daily standard. The Gantt Chart compares actual and planned performances.
8. **Henry Fayol** (1841-1925). Fayol believed that scientific forecasting and proper methods of management, satisfactory results were inevitable. Fayol focused on the managerial activities and outlined 14 principles of management.
9. **Mary Parker Follet** (1868-1933) focusing on group influences. She gave much importance to the functioning of groups in the work place and argued that organizational participants were influenced by the groups within which they work.
10. **Elton Mayo** (1880-1949) –Father of the Human Relations Approach|| conducted a study at Western Electric's Hawthorne plant to evaluate the attitudes and psychological reactions of workers in on-the-job situations by conducting various experiments like Relay assembly test room experiments, Interview phase, Bank wiring observation room experiment.
11. **Chris Argyris**: Matching Human and Organizational Development. The major contribution made by him was the Maturity-Immaturity theory. He believes that people

progress from a stage of immaturity and dependence to a state of maturity and independence.

12. **Hawthorn studies** which concluded that productivity was more a function of attitude of workers towards each other and the attention they received from the management rather than any facilities that the management may provide to improve their working conditions per se.
13. **Theory X and Theory Y** that categorizes leadership styles into two broad categories having different beliefs and assumptions about subordinates. Theory X treats people as avoiding responsibilities, being indolent and needing supervision. Theory Y sees people as basically hard working and willing to accept responsibility. Leaders proceed to deal with their subordinates on the basis of their beliefs in this broad categorization of human behavior.
14. **Michigan Studies** which identified leadership styles on the basis of leader orientation i.e. Employee Oriented and Production Oriented emphasizing the need for balancing the two to obtain optimum results.

Each of these studies has made useful contribution to the understanding of the phenomenon of Management. It is however no exaggeration to suggest that the phenomenon remains less than fully understood even till date. Great pioneers, researchers has contributed valuable opinions for employees and their feasibility at work which enable them in work progress. The notion of best practice - sometimes called 'high commitment' HRM - proposes that the adoption of certain best practices in HRM will result in better organizational performance. Overall, the theory of HRM argues that the goal of human resource management is to help an organization to meet strategic goals by attracting, and maintaining employees and also to manage them effectively. The key word here perhaps is "fit", i.e. a HRM approach seeks to ensure a fit between the management of an organization's employees, and the overall strategic direction of the company.

Why to Manage Human Resources?

Managing the human being at work place is human resource management. Human being is called as a resource because even employees are been used as other resources in the organizations. Employees are supposed to work according to the laid rules of the organization for exceeding which removal from the organization take place. Human being is the highly developed species in the world. Human being is not like other resource or animals not to respond to the situation every individual person has attitude, values, beliefs, ego, education, experience, feelings, dignity, status etc., In the organization he may by this personality can against the management depending on the situation. If one person is allowed to raise the voice hundreds could follow which in return effects the management and the performance of the individual and the organization. In order to get the work done by the employees management has to adopt the managerial techniques to manage the employees. The various techniques followed to manage the employee at work place are laying equal rules and regulations, equal rewards and equal punishments, principals and policies, proper

method of recruiting and selecting the employees, training, motivating, performance appraisal, compensation, counseling, mentoring, and quality of work life, post-retirement benefits etc. to be followed at work place in order to manage the employees.

Companies in India following Six Sigma Concept

There are several companies who are engaged in Six Sigma one way or other. Most of the Indian operations of MNCs like GE/Motorola/Allied/Conseco etc have Six Sigma built into their Systems and even though some Indian Managers(!) like to avoid, they cannot! The most significant program undertaken by an Indian company is by Wipro so far.

TATAs including TISCO/TELCO and Taj Hotels have a robust Quality Program of their own and surprisingly similar to Six sigma. It is rumored that some of these (TATA) companies may even announce a formal Six sigma initiative to further enhance quality focus .In the next two years this initiative may get the big boost as one of the biggest Indian corporate house is contemplating the initiative also. Example: GE, WIPRO, TATA STEEL, TELCO, ASIAN PAINTS, WHIRLPOOL, LG, L&T SWITCHGEAR, RELIANCE PATALGANGA, TVS SUZUKI, VIP INDUSTRIES, TATA HONEYWELL, TATA CONSULTANCY, PIDILITE INDUSTRIES ARE ALL DOING SIX SIGMA

Companies following Flexi Work time

Over time, research suggests that organizations with gender diversity perform better. And to maintain diversity at the workplace, companies have launched special offers for women employees in a bid to retain them. While companies like Hindustan Unilever (HUL) and Procter & Gamble India (P&G) have introduced flexible working hours for women employees, the Tatas and Muthoot group offer a second career option to women. HUL also offers women employees the option of working from a remote location if their roles permit. P&G, which started flexi work timings eight years ago, introduced further interventions like work from home as an enabler for better performance of its employees.

"Specifically for women, it has allowed flexibility to manage work and personal needs (like childcare) in the early years. Majority of women have returned to their careers after maternity breaks and continued to flourish in the company at all levels," most women professionals who are forced to take a career break for personal reasons, getting the personal-professional life balance back can be quite difficult.

Companies following Health, Safety and Environment

1. The Allahabad Manufacturing Division received the BSC-5 star certification for safety and occupational health from the British Safety Council in 2009.
2. The Hazira Manufacturing Division has won the ‘_Golden Peacock Award for Occupational Health & Safety’ in 2009.
3. The Jamnagar Manufacturing Division received the ‘_Golden Peacock Environment Management Award 2009’ in the Petrochemicals sector in 2009.
4. The Patalganga Manufacturing Division was bestowed with the Dahanukar trophy for the ‘_Best Occupational Health Services in an Industry’ by the Indian Association of Occupational Health (IAOH) in 2009.

Companies following Quality Circles

Frederick Winslow Taylor devised a system he called scientific management, a form of industrial engineering that established the organization of work as in Ford's assembly line. This discipline, along with the industrial psychology established by others at the Hawthorne Works of Western Electric in the 1920s, moved management theory from early time-and-motion studies to the latest total quality control ideas. A number of Indian companies have started using quality circles in a big way.

The Allahabad Manufacturing Division's three Quality Circle (QC) projects received 'excellent', 'distinguished' and 'meritorious' category certifications from the National Centre for Quality Control's (NCQC) Kanpur Chapter; while the fourth QC project was awarded 'distinguished' category certification by NCQC's Bangalore chapter in 2009. The Barabanki Manufacturing Division's two QC projects received 'excellent' and 'distinguished' category certifications from the Quality Circle National Award in 2009.

Conclusion

HRM has evolved from a number of different strands of thought and is best described as a loose philosophy of people management rather than a focused methodology. It derives largely from the 20th century but incorporates older notions about the management of people at work. The contributions made by great pioneers and researchers have been successfully followed and implemented in the organizations which was in favor of employees. Employees were given identity, their opinions were considered in various issues and the managerial styles towards employees were changed. Current practices in many organizations indicate that employees are viewed as valuable investments. The basic premise of the academic theory of HRM is that humans are not machines; therefore we need to have an interdisciplinary examination of people in the workplace.

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